

OK-VISE MULTI-RAIL RM System

Technical data

OK-VISE MULTI-RAIL RM System is the best-selling generic purpose system of OK-VISE. Compared to a traditional machine vise, the Multi-Rail system offers the following benefits:

- Using the components of the system, even the most challenging workpiece types can be machined
- All sides of a workpiece can be machined with two setups
- Multiple workpieces can be clamped simultaneously
- Workpiece will be safely fixtured in all conditions
- It is also possible to clamp very large workpieces
- Multi-Rail RM system modules are the most accurate multiple clamping modules on the market, most of them giving 10 micron accuracy

Maximum clamping force that can be applied to the base rail is 6 metric tons (60 kN).

More info can be found in [Multi-Rail RM System](#).

Catalogue C07092021 contains the best selling units in Multi-Rail RM System

You can download this document in

<https://www.ok-vise.com/en/products/brochures>

Please notice: an updated version you can get directly in a following way:

- Use Chrome browser
- Open page <https://www.ok-vise.com/en/katalogi07092021>
- Press Ctrl+P
- Save pdf or print to paper

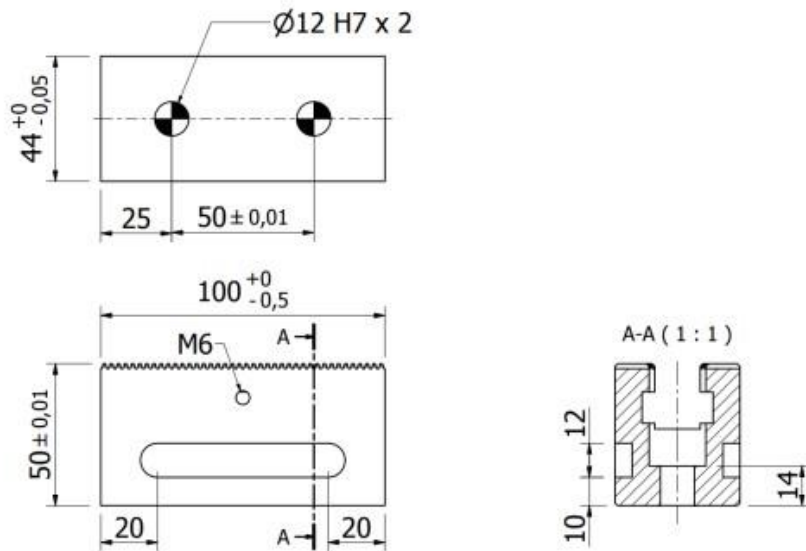
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Catalogue C07092021

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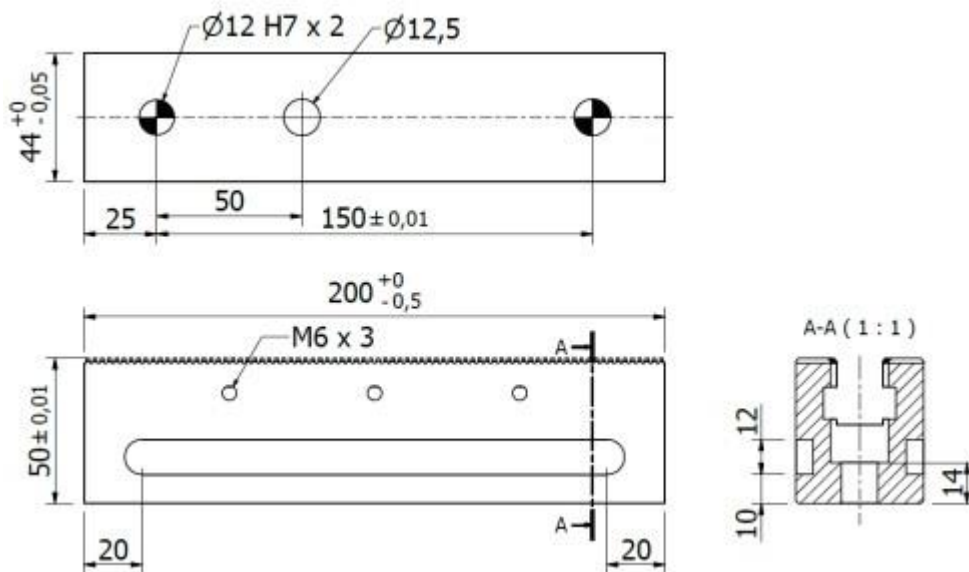
Base rail RM-100

This is the shortest rail, with two 12 mm H7 positioning holes.



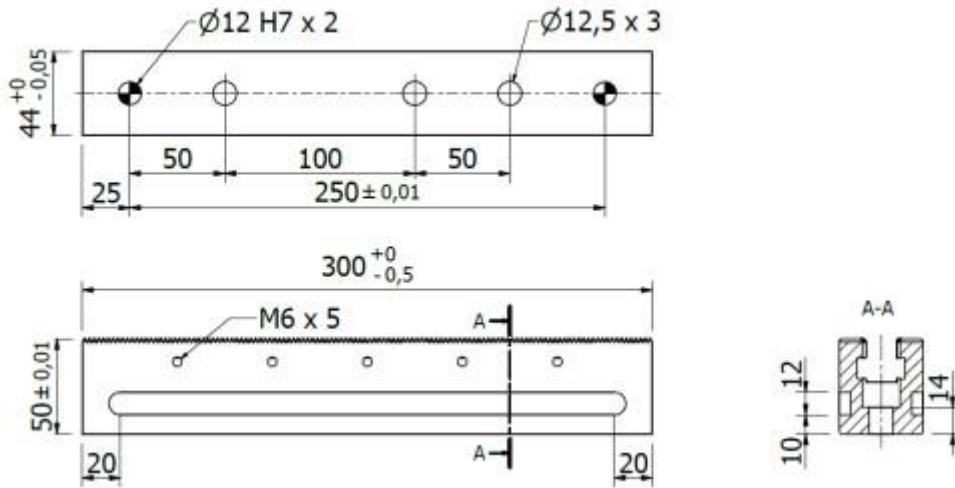
Base rail RM-200

A rail 200 mm in length provides better adjustability than the shortest RM-100 rail.



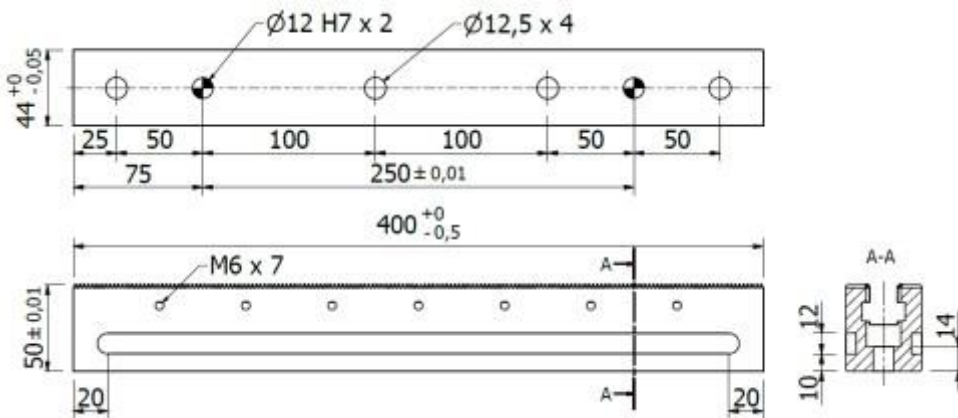
Base rail RM-300

This length rail is most commonly used to replace old-fashioned machine vises.



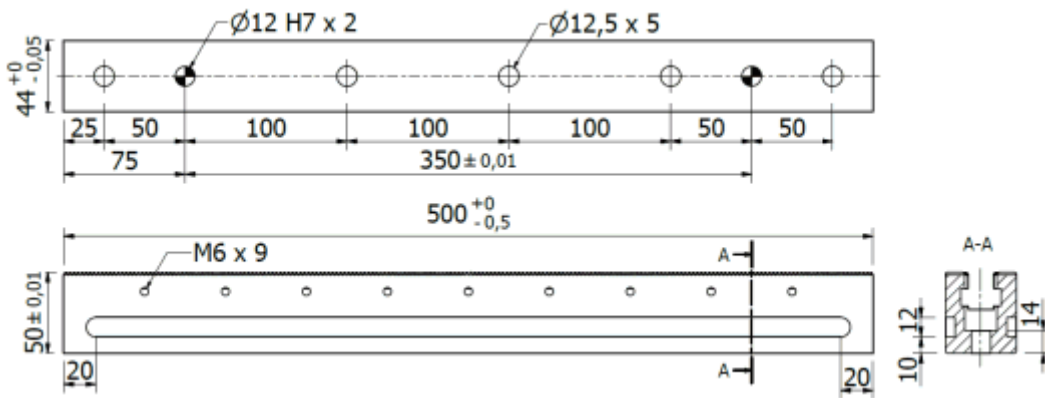
Base rail RM-400

On Multi-Rail base rails $L=400\dots700$ mm, positioning hole is the second one from the end of each rail. Please note that the end of the rail is different from the start. The numbering of the scale starts from the left.



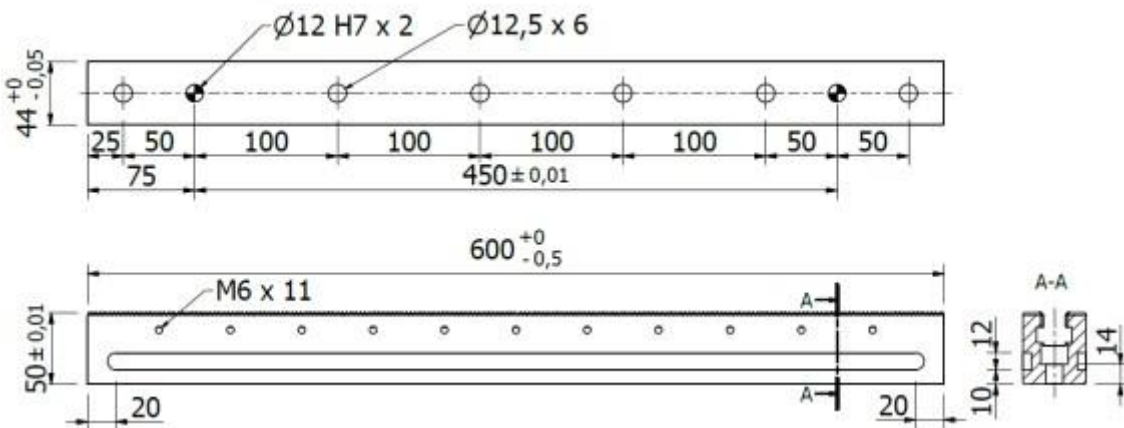
Base rail RM-500

A good universal rail for VMC and HMC machining.



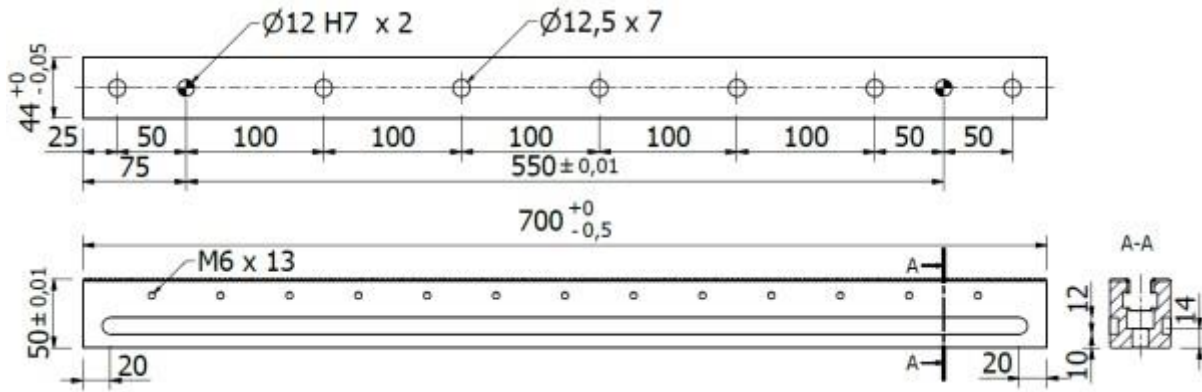
Base rail RM-600

This rail length is very popular on tooling blocks.



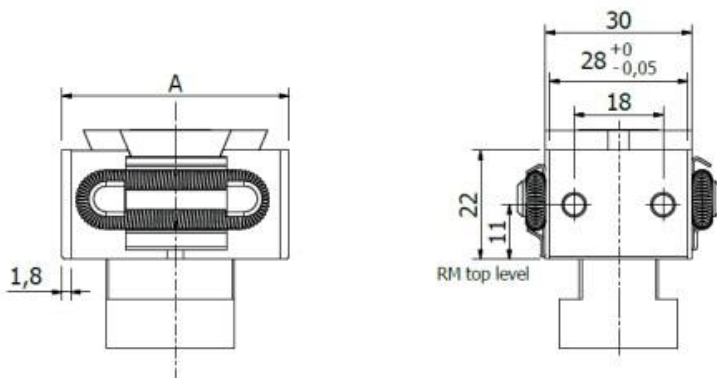
Base rail RM-700

This is the longest standard rail produced by OK-VISE. Special length rails (also longer than RM-700) are also available.



RMC-DR

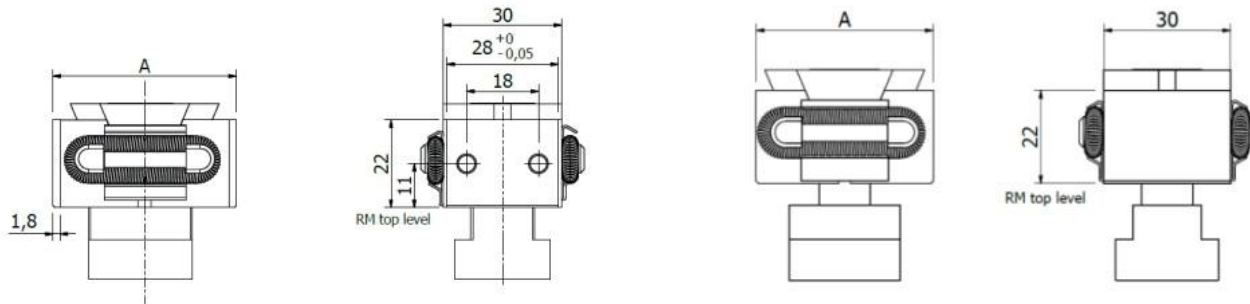
This clamp module features a D-series clamp with two serrated jaws.



RMC-DS

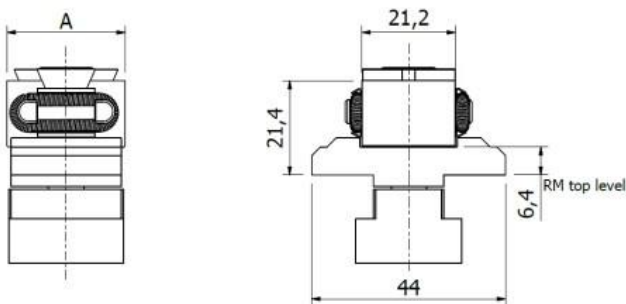
This clamp module features a D-series clamp with two smooth jaws (S).

In the clamp modules RMC-DSx, one jaw is smooth and another jaw is of another type. For example, in RMC-DSR one jaw is serrated.



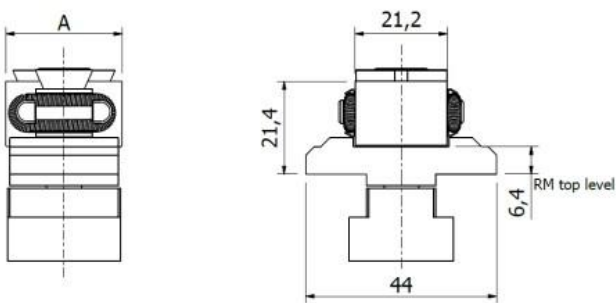
RMC-BR

This clamp module features a B-series clamp with two serrated jaws.



RMC-BS

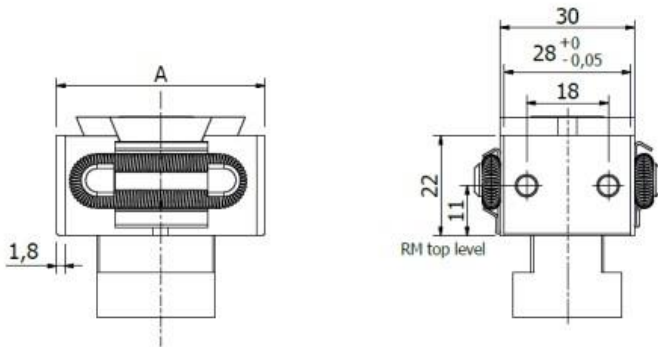
This clamp module features a B-series clamp with two smooth jaws.



RMC-DT_x

The clamp module RMC-TTX features a D-series clamp with two jaws for an additional piece (T).

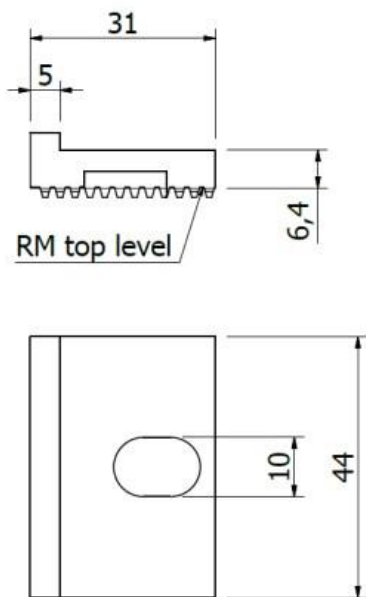
In the clamp modules RMC-DT_x, one jaw is for additional piece jaw and another one is of another type. For example, in the RMC-DTS one jaw is smooth.



Quick adjustable stopper plate PBQ-S1

This “speed plate” option for B-size.

It replaces the one stopper module, and works with all B-size clamps. Please note this module holds a clamping force in one direction only.

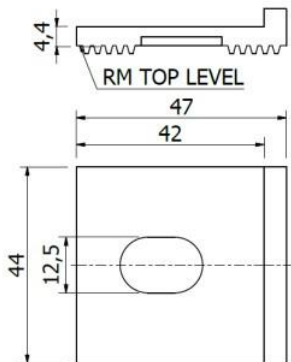


Quick adjustable stopper plate PDQ-S1

This “speed plate” option enables users of Multi-Rail RM to move clamp modules on the rail into a different position in just a few seconds.

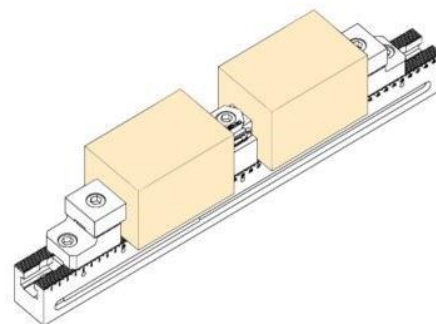
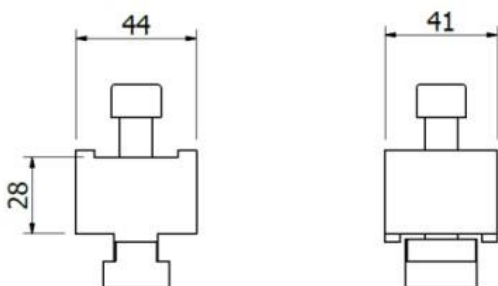
It also replaces one stopper module, and works with RMC-DS and RMC-DR.

Please notice this module holds clamping force in one direction only.



RMRC-28

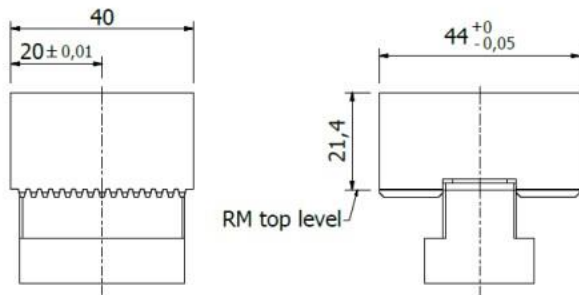
This riser block lifts up RM clamp 28 mm. This is designed to be used with D-series clamps, and a longer M12 bolt and T-nut are included. Can also be used as a rotation stop module.



RMS-S

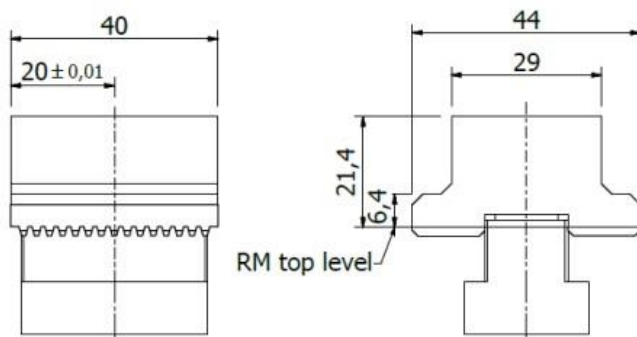
The most common stopper is RMS-S, which has two smooth and nitrided jaws. It is optimal for the second setup, when OK-VISE clamps are used with full force. Friction level is adequate even for roughing and other types of machining where high forces occur.

The accuracy from every serration to the jaw surface is ± 0.01 mm.



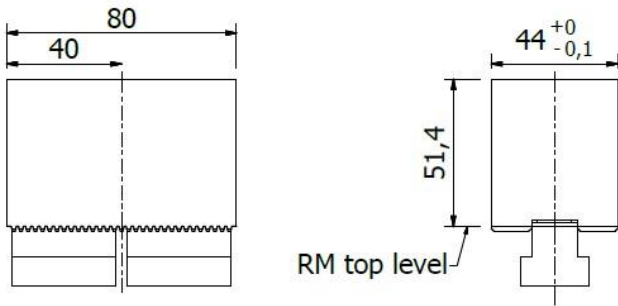
RMS-S2

RMS-S2 is more narrow than RMS-S, about the size of a B-series clamp.



RMS-S3

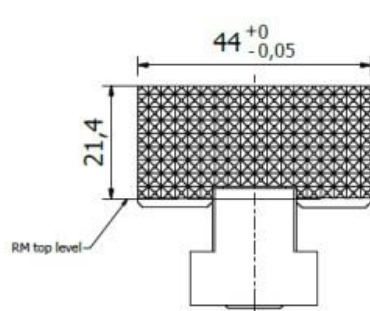
RMS-S3 is used often with D-series double-wedge clamps. Also, when used in tooling blocks higher stopper can make workpiece loading easier.



RMS-R2

This stopper type has a serrated contact area on both sides of the stop module. The contact area is nitrided.

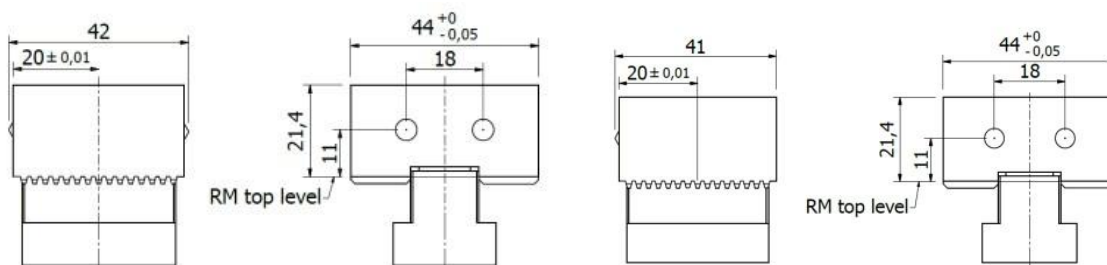
One popular variation is a stopper RMS-SR2 which has one serrated (R2) and one smooth (S) jaw.



RMS-G, RMS-Gx

RMS-G is a grip model with two HSS pins that penetrate into the workpiece, leaving tiny marks on it. The friction is much higher than that of using the standard serrated jaw, against soft steel the friction co-efficient factor is up to 0,8.

Model RMS-GS has one grip jaw and one smooth jaw.

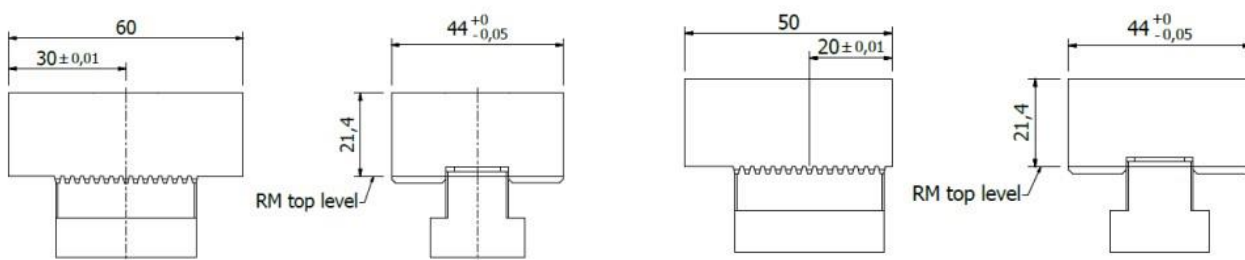


RMS-M, RMS-MS, RMS-Mx

These are machinable stopper models which are especially suitable for machining of complex workpieces, or when extreme accuracy is needed and product-specific jaws are used for machining.

RMS-M has two extended jaws that are machinable. Furthermore, all combinations can be machined because these models are made of the relatively soft material (HRC 30, not hardened or nitrided). In the RMS-MS model, one jaw is of the "normal" length, and normally it is smooth. For machining purposes this model is slightly bigger in size.

Also many other variants of combinations can be made, so "x" can be =R (serrated), V (vertical slot) etc.

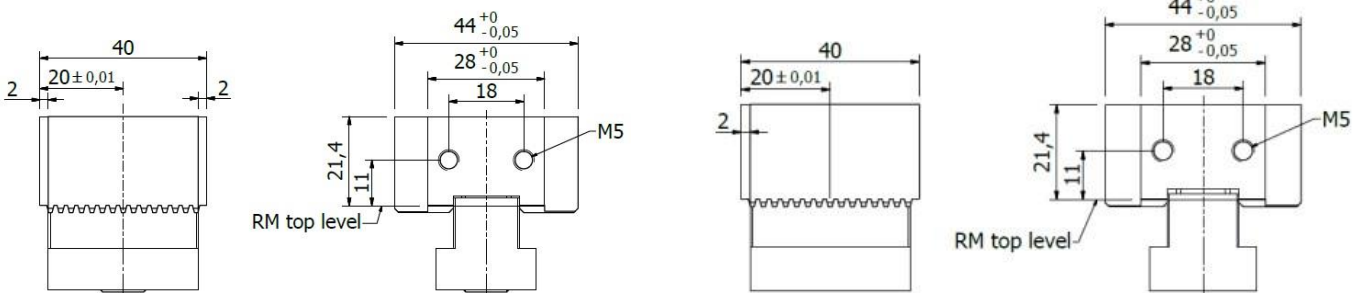


RMS-T, RMS-Tx

In this stopper module the same additional pieces can be used as in D-series low-profile clamps. In this stopper module the same additional pieces can be used as in D-series low-profile clamps.

RMS-T has two additional pieces jaws.

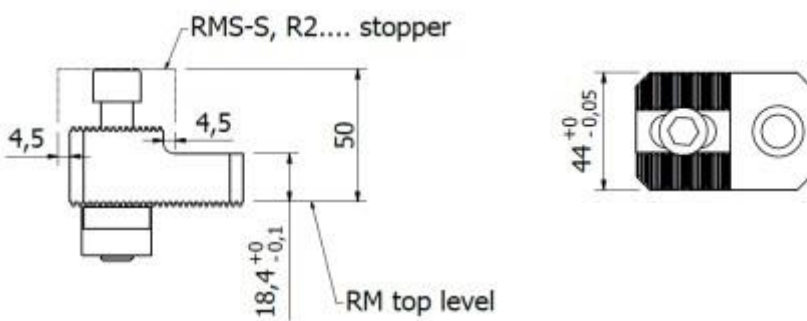
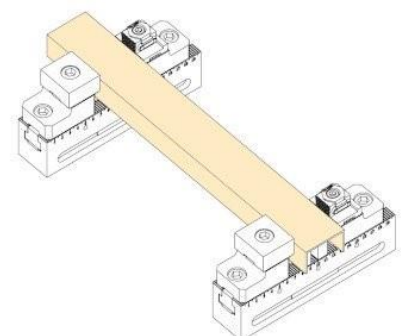
For example RMS-TS is a stop module which has one smooth jaw and one additional piece jaw.



RMRS-28

This serrated riser block lifts up RM stopper 28 mm, RM serration is both at the bottom and the top of the block. Additional RM T-nut and longer bolt are included, so stoppers like RMS-S, RMS-R etc. will work directly on this riser block. You can use the bolt and T-nut form the original stopper in the "front" hole of the riser block.

Additionally, quick setup plate PBQ-S1 and any B-series clamp can be used with the base riser unit.

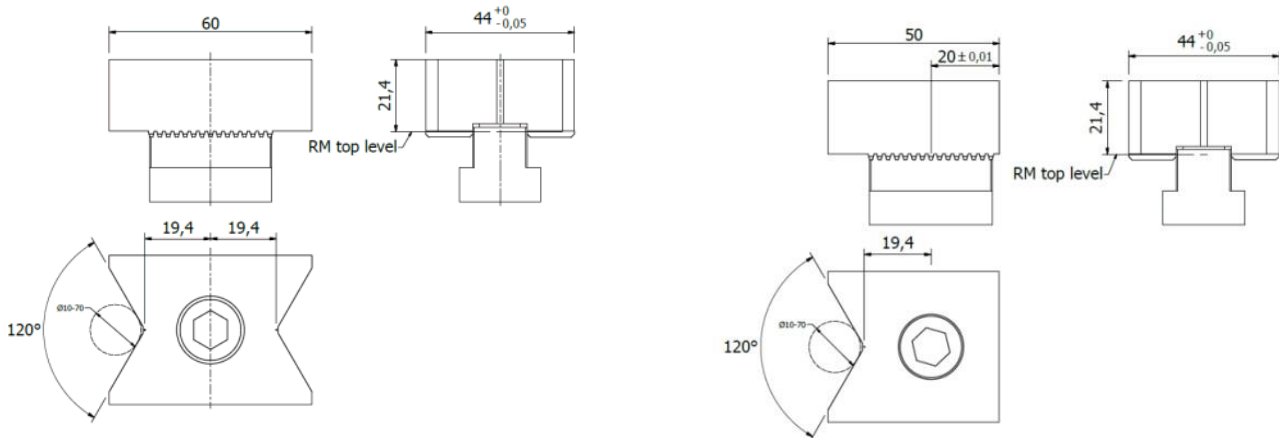


RMS-V, RMS-Vx

This model has a vertical V-shape jaw to hold round-shaped workpieces of various sizes.

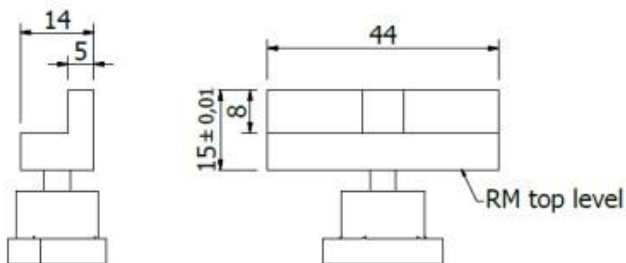
The optimal workpiece sizes are given in the Dimension drawings (see Dim. in the table above). Please note that when machining a workpiece with a diameter larger than maximum given in the Dimensions drawings, there is a line contact between the jaw and the workpiece, and the jaw is likely to leave marks on the workpiece surface.

RMS-V has two such jaws, RMS-VS has one smooth jaw (photo).



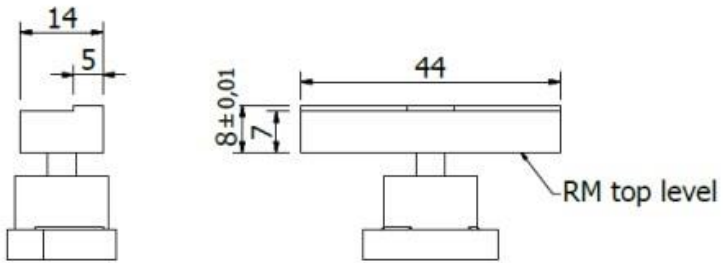
RMP-1

RMP-1 is the most common parallel model.



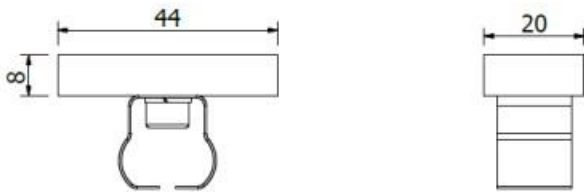
RMP-1H8

RMP-1H8 is an 8 mm high variation of RMP-1.



RMP-J1

RMP-J1 is equipped with a snap-on spring to speed up assembly process.

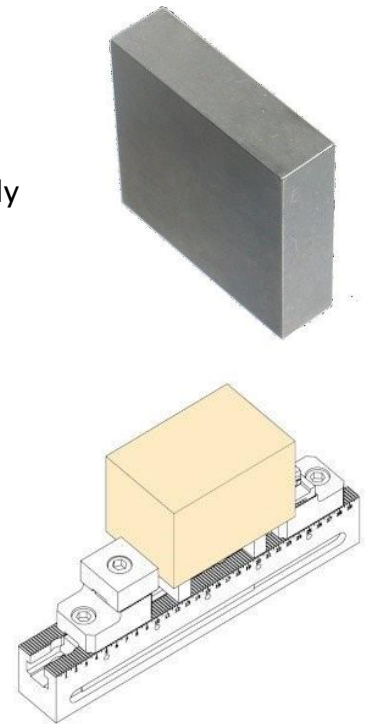
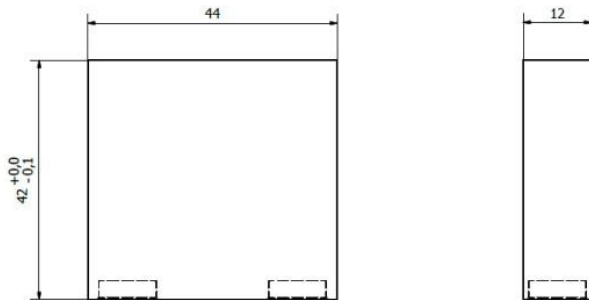


Magnet parallel RMP-M42

A parallel plate which is 42 mm high (44 mm wide, 12 mm long).

On one side there are two magnets, so this parallel plate can be easily fastened onto a fixturing base such as Multi-Rail.

This version is machinable.

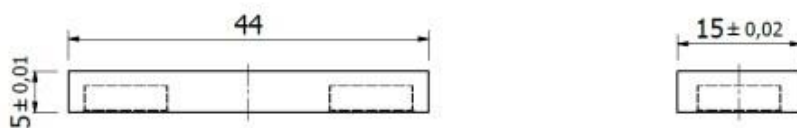


Magnet parallel RMP-MG1

A parallel plate 5x15 mm in size with a width of 44 mm.

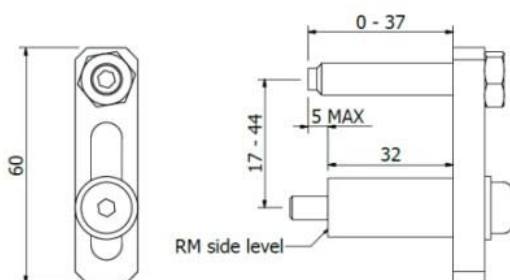
On one side there are two magnets, so this parallel plate can be easily fastened on a stopper (height 15 mm) or on a fixturing base such as Multi-Rail (height is then 5 mm).

This version is ground.



RMG-1

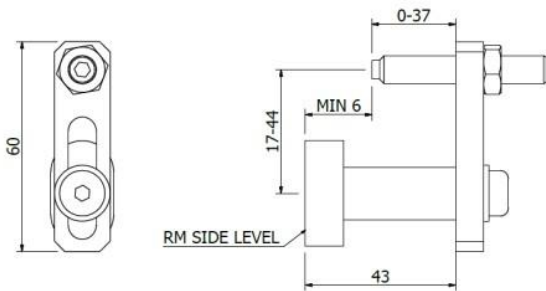
Side guide offset from the side of the rail is from -5 mm to +30 mm.



Magnet side guide RMG-M1

A combination of side guide RMG-1 and magnet M-1. This side guide can be moved rapidly from one place to another.

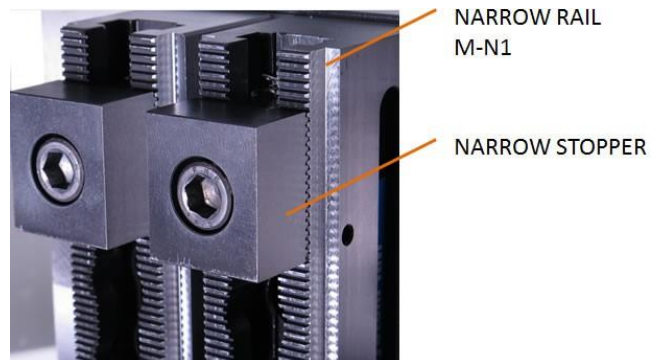
Using this type of side guide users can adjust each side guide for a specific product and keep the guide ready for the next production batch.



M-N1

In the picture on the right M-N1 stands for machining of two sides with max 4x9 mm notch.

Then, both stopper width and the width of the upper part of the rail base will be 36 mm.



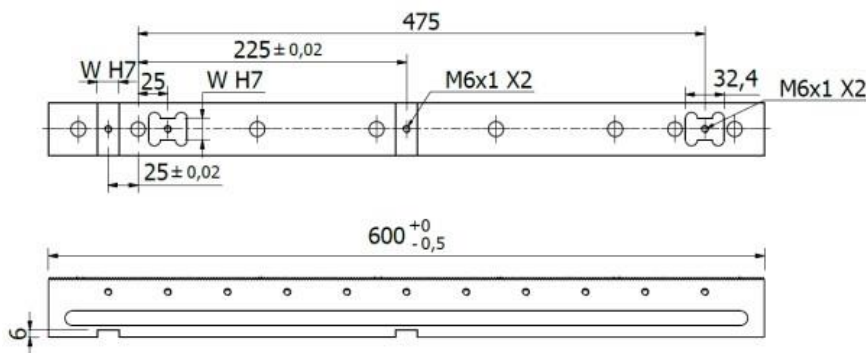
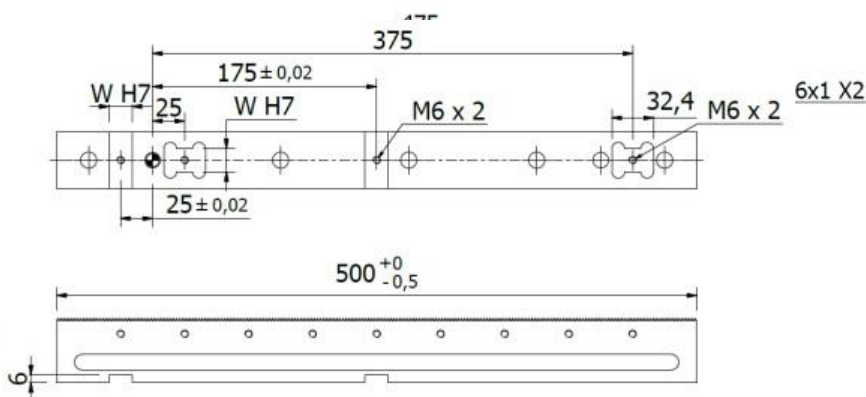
M-T1

Four slots for keys, where the lower part of the key chosen by the T-slot width.

Using the slot and keys (not included) the module – typically Multi-Rail base – can be installed parallel or perpendicular to T-slots.

Measures to be defined at order:

- Slot width 18 or 20 mm
- Slot midpoint position



Multi-Rail RM adapter sets

The following adapter sets are recommended for use in the installation works of the Multi-Rail systems on the different platforms.

Platform	Blank	Grid M12	T-Slot A	T-Slot AB
RM-100	AD-RM-2	AD-RM-2	AD-MT-xx AD-BT-xx (2 pcs)	
RM-200	AD-RM-3	AD-RM-3	AD-MT-xx AD-BT-xx (3 pcs)	AD-MT-xx AD-BT-xx (4 pcs) ICI-12 (2 pcs)
RM-300	AD-RM-5	AD-RM-5	AD-MT-xx AD-BT-xx (5 pcs)	AD-MT-xx AD-BT-xx (5 pcs) ICI-12 (2 pcs)
RM-400	AD-RM-6	AD-RM-6	AD-MT-xx AD-BT-xx (6 pcs)	AD-MT-xx AD-BT-xx (6 pcs) ICI-12 (3 pcs)
RM-500	AD-RM-7	AD-RM-7	AD-MT-xx AD-BT-xx (7 pcs)	AD-MT-xx AD-BT-xx (8 pcs) ICI-12 (4 pcs)
RM-600	AD-RM-8	AD-RM-8	AD-MT-xx AD-BT-xx (8 pcs)	AD-MT-xx AD-BT-xx (8 pcs) ICI-12 (4 pcs)
RM-700	AD-RM-9	AD-RM-9	AD-MT-xx AD-BT-xx (8 pcs)	AD-MT-xx AD-BT-xx (10 pcs) ICI-12 (5 pcs)

Installation on blank platform

Positioning holes and M12 threads are needed, just like described in "Threads and positioning holes on the platforms".

Installation on grid platform

By definition, grid platform has all positioning holes and threads ready (Multi-pupose holes).

The set AD-RM-n includes n pieces of bolts, where 2 bolts are type OKSB12-45 and the remaining ones (n-2 pieces) are of type DIN912M12X45.

Installation to T-slots

T-slot type A set enables installations parellel to T-slots.

T-slot type AB set enables installations parallel and perperdicular to T-slots.

AD-MT-xx contains machining of keys M-T1 with batch startup cost BS-1 (this is once per production order), keys LK-18xx (2 pcs) and screws DIN7984M6X10 (2 pcs).

AD-BT-xx contains installation one bolt DIN912M12X45 with T-slot nut DIN508-M12-xx. xx = T-slot width. Most typical ones are 14, 16 and 18 mm.