

Adjustable slide units

The adjustable slide units GN 900 are a work holding system which can accommodate almost any type of application.

Four standard sizes are available with different slide widths i.e. 30, 50, 80 and 120 mm which again cover almost a full specific range of applications.

As standard for each slide width there are externally guided slides with different openings. The design of these adjustable slide units can accommodate outsize components.

These adjustable slide units can be combined with a range of adaptor components to bring the adjustable slide unit into any required position whether horizontal, vertical or any other angular position for machining operations. A unique clamping technique (design features page 449) allows simple and rapid workpiece clamping.

All components are in aluminium, stainless steel and plastic material which makes the adjustable slide units with control knob (type D) a corrosion free unit.

A range of different operating features with or without digital position indicators is also available. In addition there is a range of other accessories.

Other features:

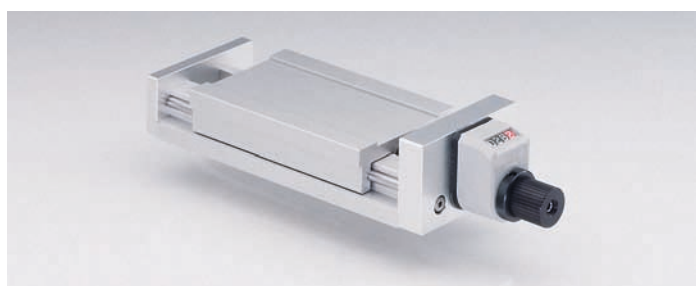
- slides in anodised aluminium
- high load ratings
- favourable friction values
- high quality slideways by virtue of the anodised surface hardness
- backlash free shaft adjustment
- fine adjustment to 0,05 mm
- scale rings with zero position
- adjustable clamping levers to suit the positioning of the slides

Application examples:

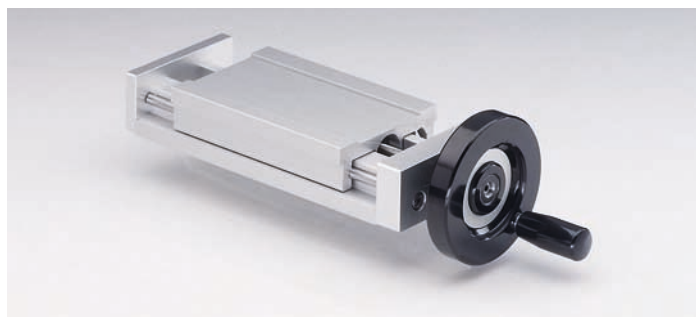
- Precision positioning of soldering / welding heads
- Adjustment of inkjet printers
- Adjustment of measurement cameras
- Adjustment of laser heads
- Re-adjustment of back stops
- Adjustment of sensors



Specifications with control knob (type D)



Specification with control knob and position indicator (type DN/DR)



Specification with handwheel (type H)



Specification with handwheel and position indicator (type HN/HR)



Specification without adjustable spindle (type S) for manual or pneumatic operation

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Control elements



The manually operated rotary table GN 900.6 is a positioner which extends the range of applications for the adjustable slide units considerably.

This rotary table can, of course, also be used without the adjustable slide units.



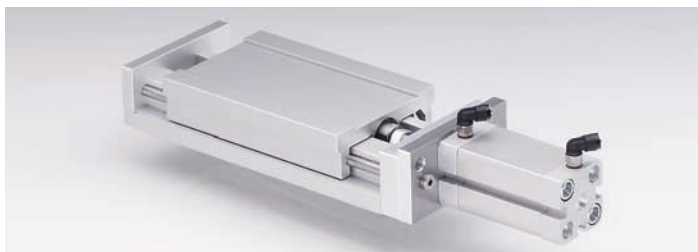
The adjustable assembly X-Y consisting of two adjustable slide units GN 900 and an X - Y connecting set GN 900.2 with a mounting plate GN 900.4.



The adjustable assembly X-Y-Z consisting of three adjustable slide units GN 900, X- and Z-axis with position indicator, plus rotary table GN 900.6 mounted on Z-axis, assembled on mounting plate GN 900.4.



The adjustable assembly X-Y consisting of two adjustable slide units GN 900, Y-axis with rotary plate GN 900.5 positioned at a horizontal cross angle of 120°.



Special execution

Adjustable slide unit type S with a mounted pneumatic cylinder.

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The outer slide is made of a press formed block of anodised aluminium extrusion which is usually the moving part.

As a standard there is usually one outer slide size for each outside slide length on which the connecting sets GN 900.2 and mounting plates GN 900.4 and rotary plates GN 900.5 can be mounted.

Special lengths can be supplied.

The inner slide is also made of a press formed block of anodised aluminium extrusion which is the carrier. The guides are made of two high grade shafts in stainless steel.

High load ratings and favourable friction values is achieved by the anodised hard guide surfaces.

The length of the inner slide is determined by the length of the outer slide by adding the stroke.

The backlash free drive unit consists of an end plate and a preloaded stainless steel spindle, ball bearing mounted, and a preloaded plastic nut.

The thread pitches are:

Slide size 30: 0,5 mm

Slide sizes 50, 80 120: 1,0 mm

For positioning a scale is used (one graduation line $\hat{=}$ 0,05 mm adjustable range) which can be reset to „0“.

Permissible load values of the adjustable slide units GN 900

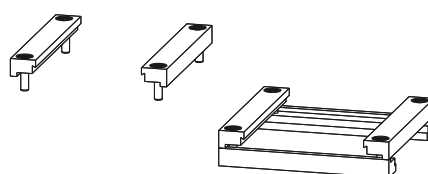
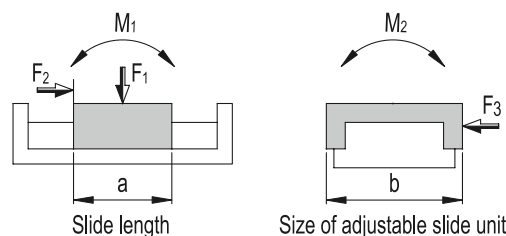
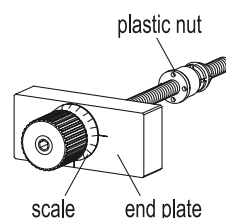
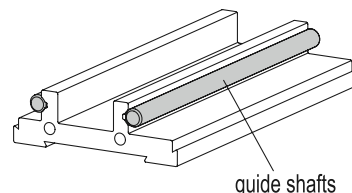
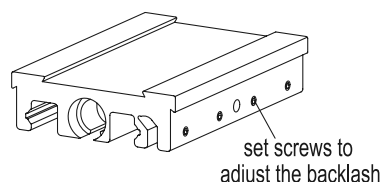
b	F ₁ [N]	F ₂ [N]	F ₃ [N]*	M ₁ [Nm] in relation to a	M ₂ [Nm]
30	150	65	40	2 $\alpha = 45$	2
50	300	215	120	4 $\alpha = 70$	5
80	500	365	150	8 $\alpha = 120$	10
120	1000	700	300	15 $\alpha = 160$	20

*) F₂ is the max/permissible sliding thrust

Fastening units GN 900.1 consist to two mounting rails. On the latter, the adjustable slide unit is mounted on a base plate from the operator's side.

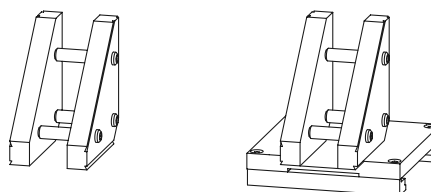
Connecting sets GN 900.2 consist of four rails. With the latter, two adjustable slide units are combined to form an adjustable assembly X – Y (or Y – Z).

Connecting sets GN 900.3 consist of two plates. With the latter two adjustable slide units combined to form an adjustable assembly X-Z (or Y-Z). If this slide has to be parallel to the reference axis this is achieved by using an additional plate (type P).



GN 900.3-S

GN 900.3-P

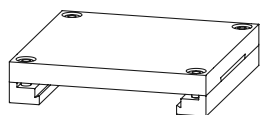


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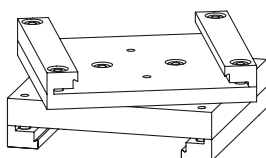
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Control elements

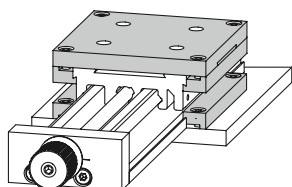


Mounting plates GN 900.4 serves as an adaptor plate to be machined on the side which is required for mounting. By using a machined mounting plate further work on the actual slide can be eliminated.

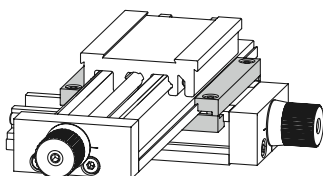
The plate is fixed with the fastening unit GN 900.1 on the adjustable slide unit.



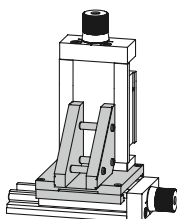
The rotary plate GN 900.5 allows oblique positioning of the adjustable slide unit at any angle.



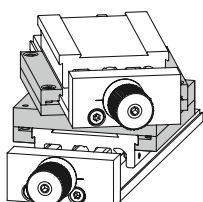
Adjustable slide unit with mounting plate GN 900.4 fitted to the base plate by using fastening unit GN 900.1.



Adjustable slide unit X-Y, adjustable slide unit is fitted to the base plate using connecting set GN 900.2.



Adjustable slide unit X-Z, adjustable slide unit is connected together using the connecting set GN 900.3.



Adjustable slide unit X-Y, Y-slide with rotary plate GN 900.5 set shown in an angular position.