

Adjustable slide units

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

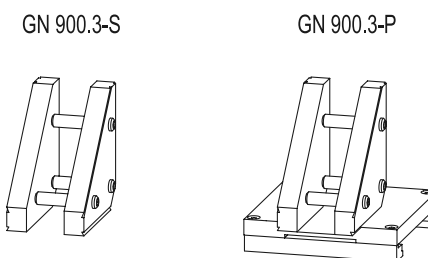
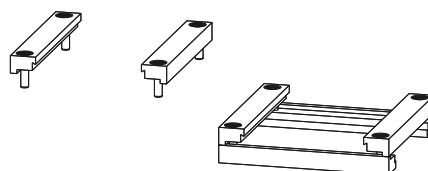
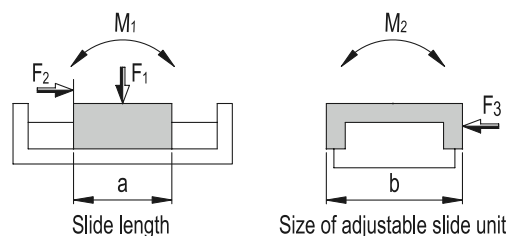
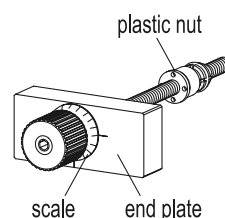
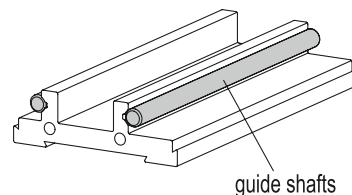
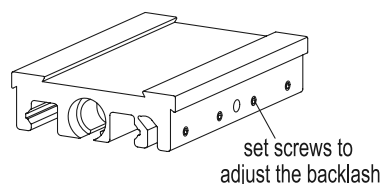
b	F ₁ [N]	F ₂ [N]	F ₃ [N]*	M ₁ [Nm] in relation to a	M ₂ [Nm]
30	150	65	40	2 $\alpha = 45$	2
50	300	215	120	4 $\alpha = 70$	5
80	500	365	150	8 $\alpha = 120$	10
120	1000	700	300	15 $\alpha = 160$	20

*) 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).

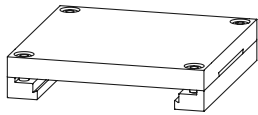


Adjustable slide units

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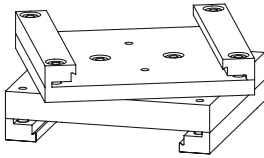
450

Control elements

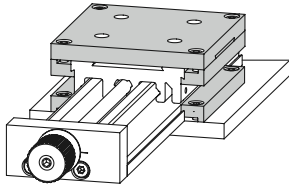


Mounting plates GN 900.4 serves as an adaptor plate to be machined on the side which is required for mounting. By using a machined mounting plate further work on the actual slide can be eliminated.

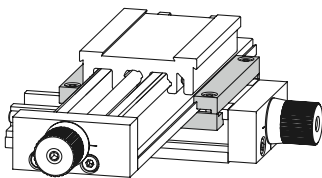
The plate is fixed with the fastening unit GN 900.1 on the adjustable slide unit.



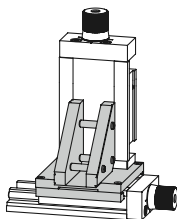
The rotary plate GN 900.5 allows oblique positioning of the adjustable slide unit at any angle.



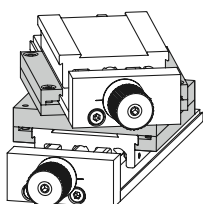
Adjustable slide unit with mounting plate GN 900.4 fitted to the base plate by using fastening unit GN 900.1.



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.

Double tube linear actuators

Designs



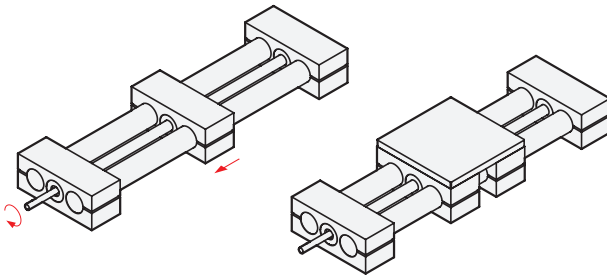
Description

Double tube linear actuators

GN 491 / GN 492

(→ Page 2 / Page 4)

with right **or** left hand thread,
single shaft end or two shaft ends.



GN 491

GN 492

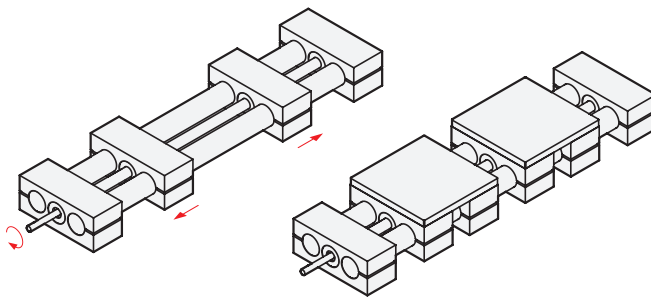
Description

Double tube linear actuators

GN 493 / GN 494

with right **and** left hand thread,
single shaft end or two shaft ends,
both sliders move symmetrically.

Double tube linear actuators
GN 493 / GN 494 → on request.



GN 493

GN 494

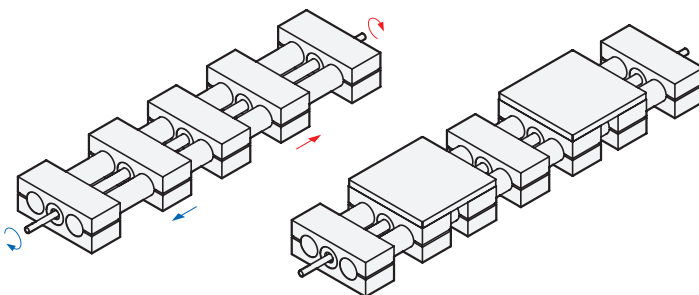
Description

Double tube linear actuators

GN 495 / GN 496

with two separate spindles,
each with right **or** left hand thread,
both sliders move independently of
each other.

Double tube linear actuators
GN 495 / GN 496 → on request.



GN 495

GN 496

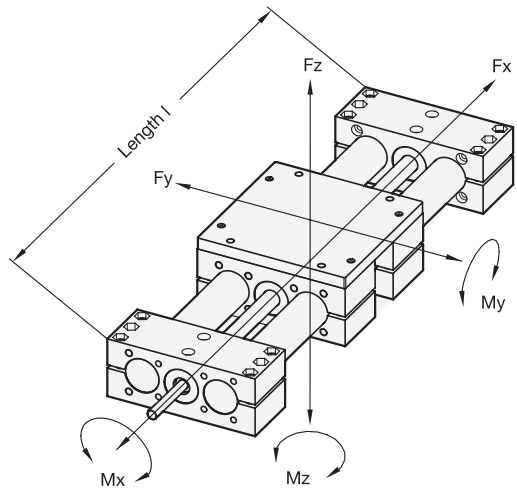
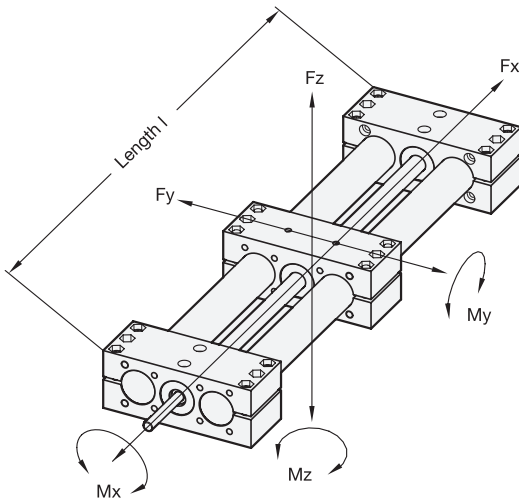
Double tube linear actuators

Technical description



GN 491

GN 492



d	Fx in N	Fy in N for l =			Fz in N for l =			Mx	My	Mz
GN 491		500	1000	1500	500	1000	1500	in Nm	in Nm	in Nm
30	850	1100	900	550	600	350	150	100	100	100
50	1900	3850	2400	2100	3100	700	200	180	220	290

d	Fx in N	Fy in N for l =			Fz in N for l =			Mx	My	Mz
GN 492		500	1000	1500	500	1000	1500	in Nm	in Nm	in Nm
30	850	1550	1300	800	700	550	250	150	150	200
50	1900	7500	5100	2700	3400	850	340	250	350	530

The specified forces Fy and Fz cause a flexure of the guide tube of approx. 0,5 mm.

Description

The slider is moved via a bearing-type trapezoidal thread spindle and a guide nut. The slider is guided through two parallel chrome-plated tubes, resulting in a high load capacity and allowing high bending moments to be compensated by the linear actuator.

For type GN 492, a second slider and an adapter plate extend the options for applications.

These double tube linear actuators have been designed for manual operation (handwheel). With the appropriate lubrication, they can also absorb rotary spindle speeds of as much as 250 rpm.

The positioning accuracy is 0,2 mm / 300 mm travel, the maximum reverse play is 0,1 mm.

To measure the adjustment or the positioning, digital position indicators GN 953 / GN 954 may be attached.

Further information see on the standard pages of GN 491 / GN 492 → Page 2 / 4.