Gliding Assemblies

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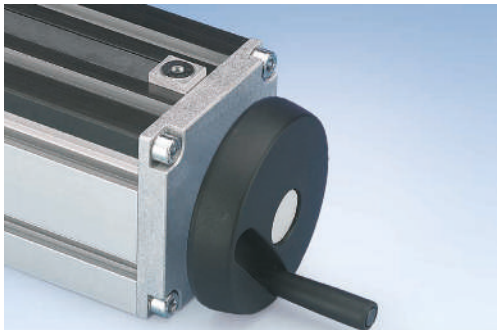
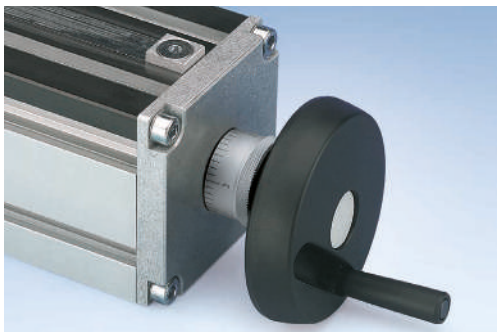
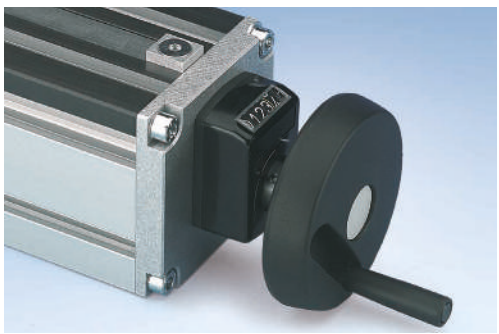
» A simple solution for manual positioning tasks. «

Our adjusting units (VST) are gliding assemblies in which the different guide components, the profile and the carriages operate on gliding elements rather than being separated by roller bearings. The large contact surfaces and special coating make the gliding assemblies virtually maintenance free. The adjusting units can be supplied in different shapes and combinations as required.

The two basic sizes of adjusting unit use mk 2015 (50x50) and mk 2011 (100x100) aluminium profiles as the profiles. A high-quality coating is mechanically applied to the contact surfaces to ensure good gliding properties and a wear-resistant surface. The standard version of the adjusting units is equipped with ball-bearing-mounted trapezoidal threaded spindles with POM nuts, which are protected from dirt by a stainless steel cover. The nuts, the bearing and the gliding assembly are low maintenance. Custom modifications are available on request, e.g. rust-proof spindles, bronze trapezoidal nuts, ball screws or motorised drives.







The position of the slide carriages can be adjusted with different operating options. When using the adjusting unit with a handwheel, you turn the wheel manually and cannot view the adjustment. When using the adjusting unit with a handwheel and scaling, the adjustment can be viewed on the scaling. In the variant of the adjusting unit with a handwheel and mechanical digital display, the adjustment can be viewed on the digital display.

If requested, the adjusting units can also be operated with a motor. The maximum speed is v = 1 m/min.

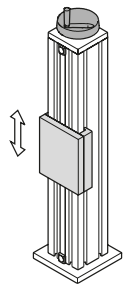
Features of mk Gliding Assemblies

- For applications that require manual adjustment
- High static load capacity
- Low-maintenance
- Good dry-running characteristics
- Good damping
- Compact design
- Low-noise running

Gliding Assemblies

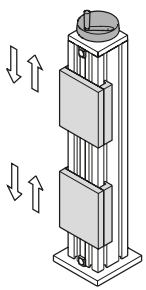
Designs

Adjusting unit with one slide carriage

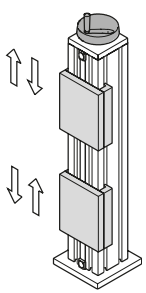


Adjusting unit with two slide carriages (even adjustment)

Independently adjustable lower carriages available as an option

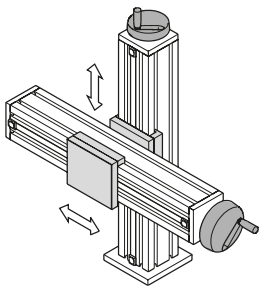


Adjusting unit with two slide carriages (even adjustment)



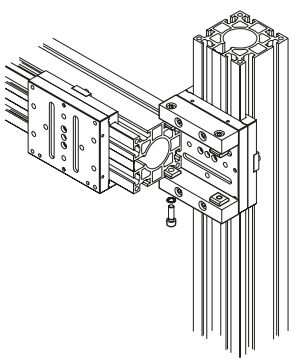
Combinations

A connecting kit lets you combine two adjusting units into one two-axis system.



Connecting kit
for cross-VST 2015
B46.07.020

Connecting kit
for cross-VST 2011
B46.07.021



Clamping Levers and Wipers

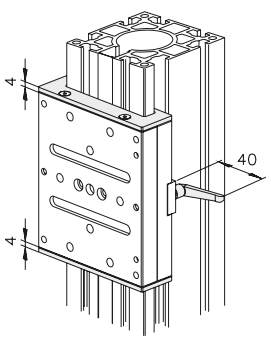
The felt wiper prevents solid objects from entering between the slide carriages and guide. It can easily be bolted onto the standard slide carriages as an accessory.

In the standard system, the slide carriage is clamped using a clamping plate that is fastened by tightening a screw. This can also be done using an optional clamping lever.

Felt wiper system 2015
B03.00.011

Felt wiper system 2011
B03.00.012

Clamping lever
K110030061



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Sample order

Adjusting unit		VST 2011-H	
Item no.		**B85.00.020**	
Length		L = ... mm	
Stroke		H = ... mm	
Operating option	Handwheel	Scaling	Digital*
Base plate	Version A	Version B	
Felt wiper	Yes	No	
Clamping lever	Yes	No	

For the adjusting unit with two slide carriages with even adjustment, please specify whether it uses one or two trapezoidal nuts.

With two trapezoidal nuts, Lx = ... mm (+_ 2 mm)

*For the digital display, please specify “Front” or “Top” for the reading direction and display of numbers.

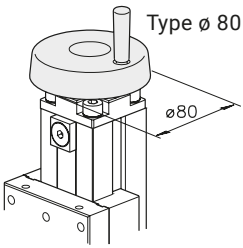
Gliding Assemblies

Adjusting Units VST 2015

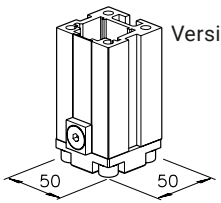
Mounting profile:	mk 2015 (50 x 50 mm)
Trapezoid-thread spindle:	Tr 16 x 4
Axial spindle load:	500 N
Standard lengths L:	250 mm, 500 mm, 750 mm and 1000 mm

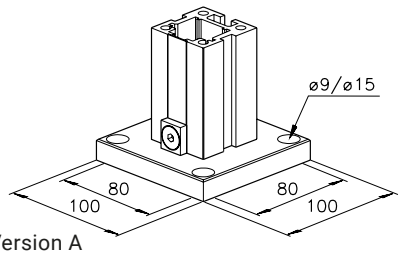
The stroke per revolution is 4 mm,
the minimum stroke length is 10 mm,
and the maximum length L = 1400 mm.

Handwheel



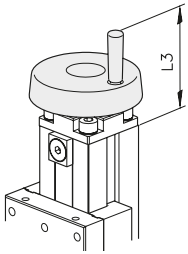
Base Plates





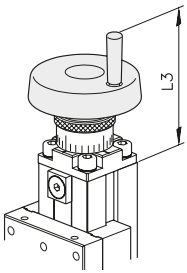
Scaling

System 2015 without scale



Type ø 80:
L3 = 90 mm

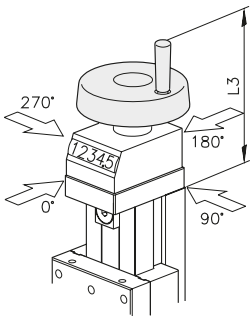
System 2015 with scale

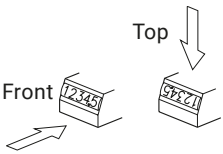


The scaling has a spacing of 0.1 mm.

Type ø 80:
L3 = 117 mm

System 2015 with Mechanical Digital Display





When ordering, please specify "Front" or "Top" for the reading direction and display of numbers.

Spacing: 0.05 mm

Type ø 80: L3 = 129 mm

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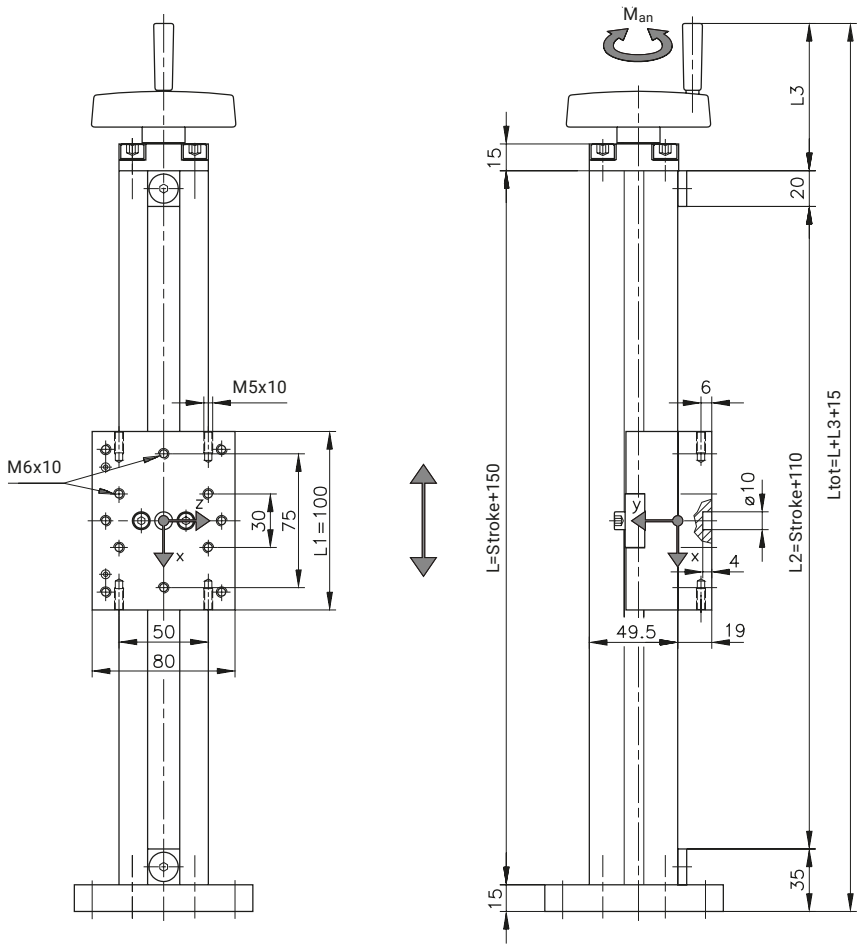
VST 2015 with one Slide Carriage



Designs

Design	Without scale	Scale	Digital display
Designation	VST 2015-H	VST 2015-S	VST 2015-D
Type	ø 80	ø 80	ø 80
Item no.	**B85.00.015**	**B85.00.016**	**B85.00.017**

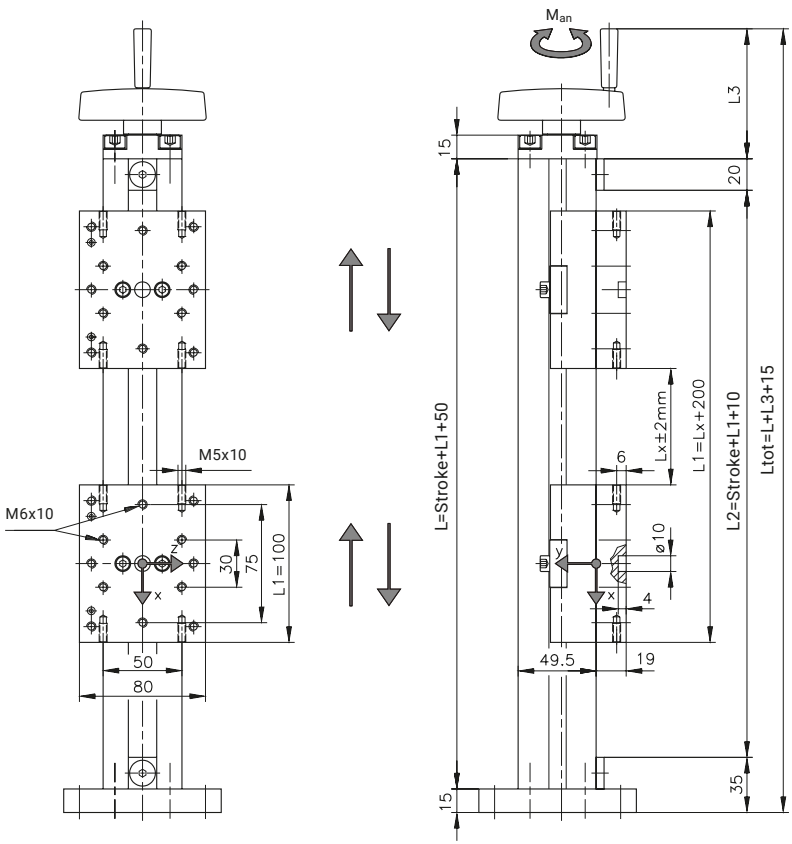
Maximum load specifications for VST 2015

F_y [N]	F_z [N]	M_x [Nm]	M_y [Nm]	M_z [Nm]	M_{Drive} [Nm]	n [min^{-1}]	v [m/min]
750	750	25	25	25	2.5	250	1

Check max. load specifications for slide carriages, and suitability for use if necessary

VST 2015 with two Synchronised or Independent Slide Carriages

Options:
VST with two trapezoidal nuts: the two slide carriages are synchronised (see the arrow directions)
VST with one trapezoidal nut: the lower slide carriages can be separately adjusted manually



Designs

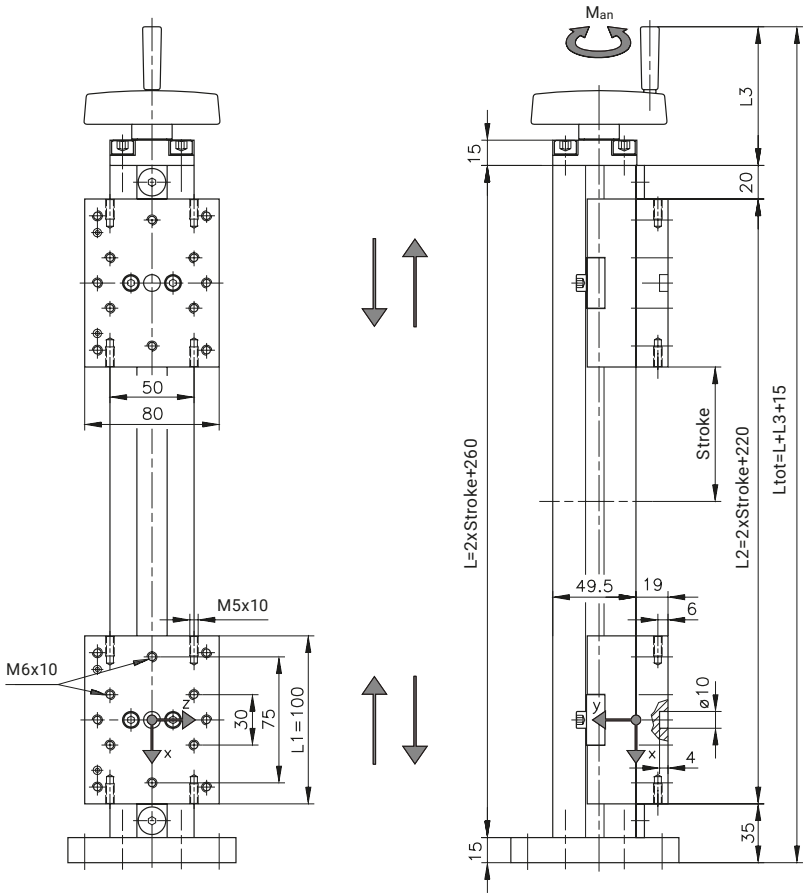
Design	Without scale	Scale	Digital display
Designation	VST 2015-H-2	VST 2015-S-2	VST 2015-D-2
Type	ø 80	ø 80	ø 80
Item no.	**B85.00.115**	**B85.00.116**	**B85.00.117**

Maximum load specifications for VST 2015

F_y* [N]	F_z* [N]	M_x* [Nm]	M_y* [Nm]	M_z* [Nm]	M_{Drive} [Nm]	n [min^{-1}]	v [m/min]
750	750	25	25	25	2.5	250	1

Check max. load specifications for slide carriages, and suitability for use if necessary. *Max. load specifications per slide carriage.

VST 2015 with Two Synchronised Slide Carriages



Designs

Design	Without scale	Scale	Digital display
Designation	VST 2015-H-G	VST 2015-S-G	VST 2015-D-G
Type	ø 80	ø 80	ø 80
Item no.	**B85.00.215**	**B85.00.216**	**B85.00.217**

Maximum load specifications for VST 2015

F_y* [N]	F_z* [N]	M_x* [Nm]	M_y* [Nm]	M_z* [Nm]	M_{Drive} [Nm]	n [min^{-1}]	v [m/min]
750	750	25	25	25	2.5	250	1

Check max. load specifications for slide carriages, and suitability for use if necessary. *Max. load specifications per slide carriage.

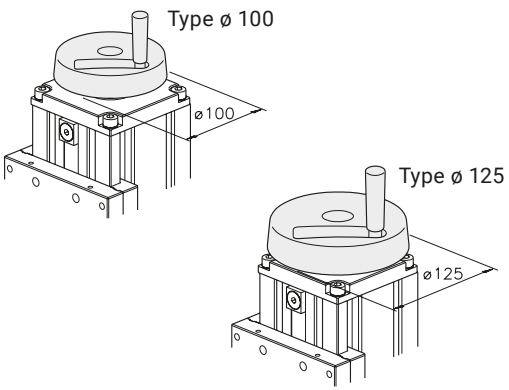
Gliding Assemblies

Adjusting Units VST 2011

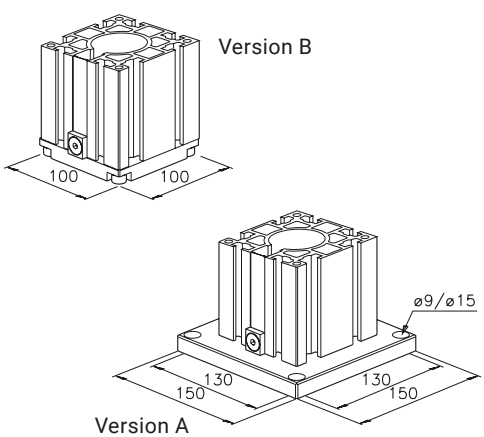
Mounting profile: mk 2011 (100 x 100 mm)
Trapezoid-thread spindle: Tr 20 x 4
Axial spindle load: 1000 N
Standard lengths L: 250 mm, 500 mm, 750 mm and 1000 mm

The stroke per revolution is 4 mm,
the minimum stroke length is 10 mm,
and the maximum length L = 1400 mm.

Handwheel

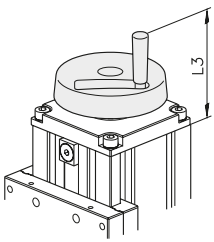


Base Plates



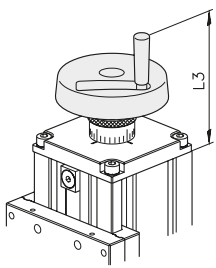
Scaling

System 2011 without scale



Type ø 100: L3 = 97 mm
Type ø 125: L3 = 110 mm

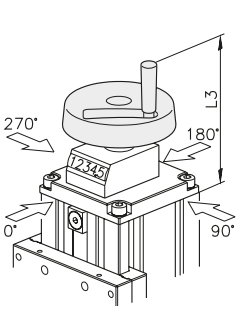
System 2011 with scale

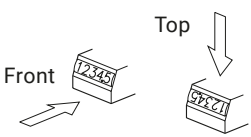


The scaling has a spacing of 0.1 mm

Type ø 100: L3 = 123 mm
Type ø 125: L3 = 136 mm

System 2011 with Mechanical Digital Display





When ordering, please specify "Front" or "Top" for the reading direction and display of numbers.

Spacing: 0.05 mm
Type ø 100: L3 = 136 mm
Type ø 125: L3 = 149 mm

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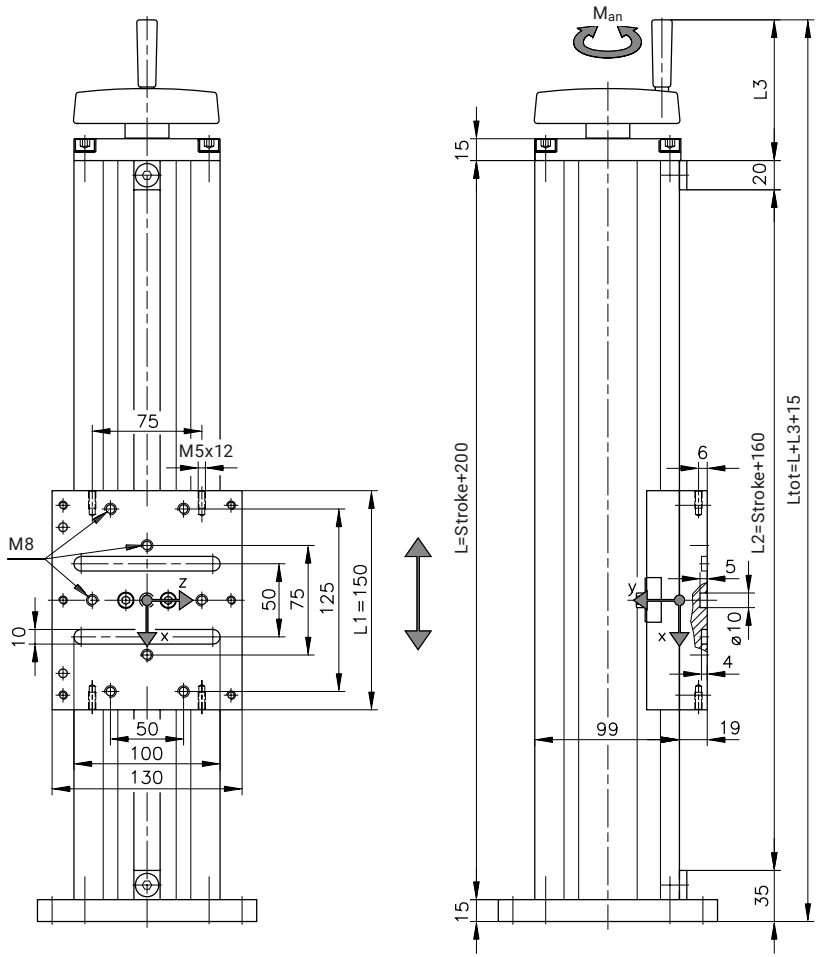
VST 2011 with one Slide Carriage



Designs

Design	Without scale		Scale		Digital display	
Designation	VST 2011-H	VST 2011-H	VST 2011-S	VST 2011-S	VST 2011-D	VST 2011-D
Type	ø 100	ø 125	ø 100	ø 125	ø 100	ø 125
Item no.	**B85.00.020**	**B85.00.025**	**B85.00.021**	**B85.00.026**	**B85.00.022**	**B85.00.027**

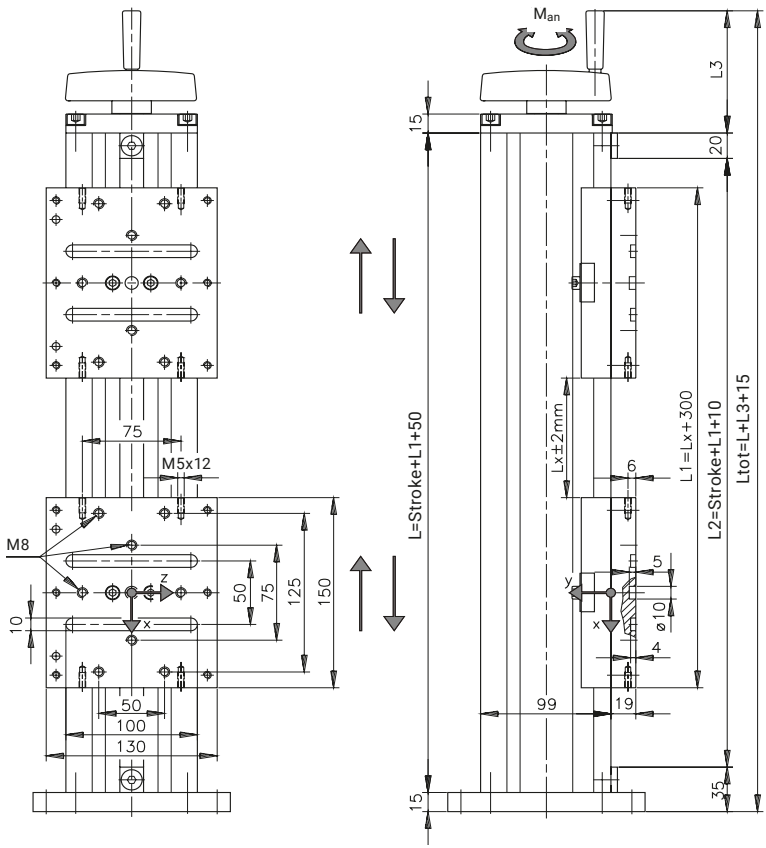
Maximum load specifications for VST 2011

F_y [N]	F_z [N]	M_x [Nm]	M_y [Nm]	M_z [Nm]	M_{Drive} [Nm]	n [min^{-1}]	v [m/min]
2000	2000	75	100	100	6	250	1

Check max. load specifications for slide carriages, and suitability for use if necessary.

VST 2011 with Two Synchronised or Independent Slide Carriages

Options:
VST with two trapezoidal nuts: the two slide carriages are synchronised (see the arrow directions)
VST with one trapezoidal nut: the lower slide carriages can be separately adjusted manually



Designs

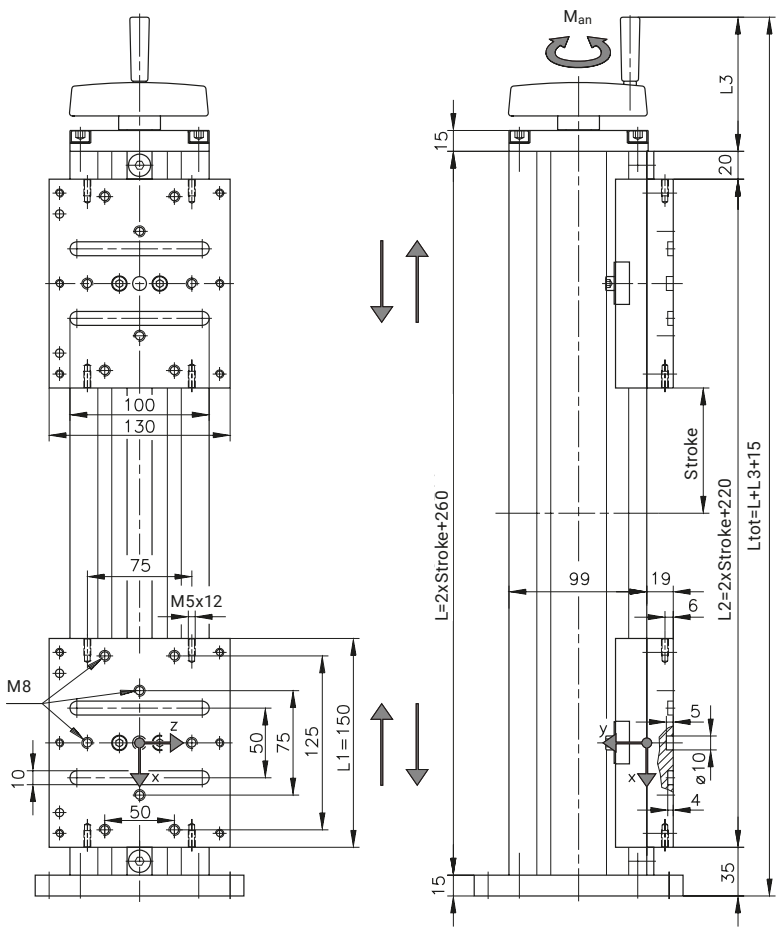
Design	Without scale		Scale		Digital display	
Designation	VST 2011-H-2	VST 2011-H-2	VST 2011-S-2	VST 2011-S-2	VST 2011-D-2	VST 2011-D-2
Type	ø 100	ø 125	ø 100	ø 125	ø 100	ø 125
Item no.	**B85.00.120**	**B85.00.125**	**B85.00.121**	**B85.00.126**	**B85.00.122**	**B85.00.127**

Maximum load specifications for VST 2011

F_y* [N]	F_z* [N]	M_x* [Nm]	M_y* [Nm]	M_z* [Nm]	M_{Drive} [Nm]	n [min^{-1}]	v [m/min]
2000	2000	75	100	100	6	250	1

Check max. load specifications for slide carriages, and suitability for use if necessary. *Max. load specifications per slide carriage.

VST 2011 with Two Synchronised Slide Carriages



Designs

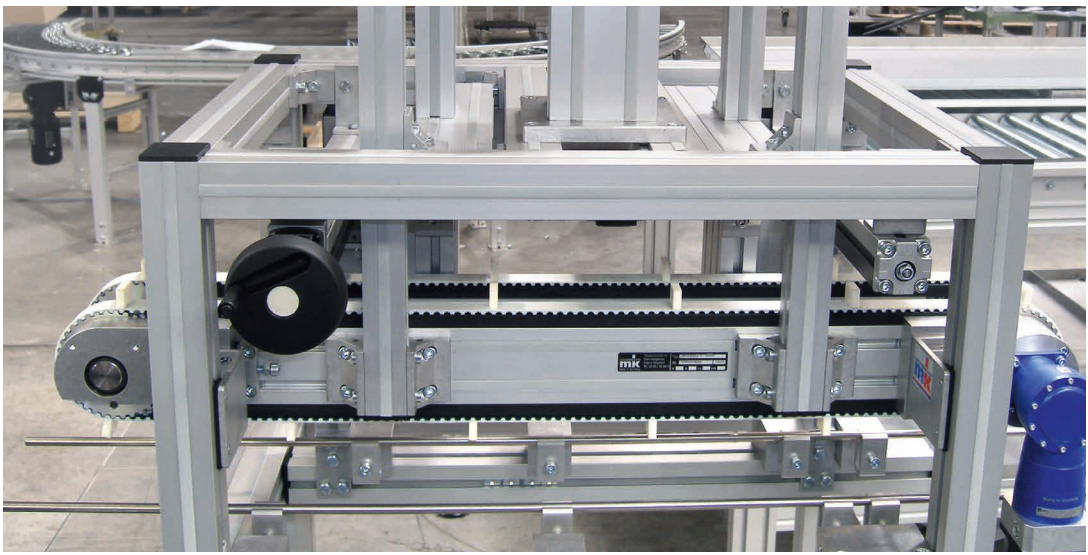
Design	Without scale		Scale		Digital display	
Designation	VST 2011-H-G	VST 2011-H-G	VST 2011-S-G	VST 2011-S-G	VST 2011-D-G	VST 2011-D-G
Type	ø 100	ø 125	ø 100	ø 125	ø 100	ø 125
Item no.	**B85.00.220**	**B85.00.225**	**B85.00.221**	**B85.00.226**	**B85.00.222**	**B85.00.227**

Maximum load specifications for VST 2011

F_y* [N]	F_z* [N]	M_x* [Nm]	M_y* [Nm]	M_z* [Nm]	M_{Drive} [Nm]	n [min^{-1}]	v [m/min]
2000	2000	75	100	100	6	250	1

Check max. load specifications for slide carriages, and suitability for use if necessary. *Max. load specifications per slide carriage.

Application Examples

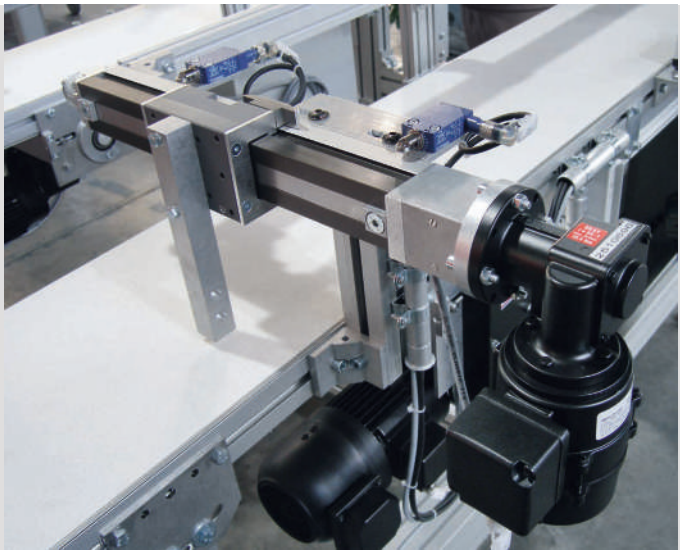


Dual VST 2015 with coupling via timing belts for width adjustment of the ZRF-P 2040.02 cycle conveyor

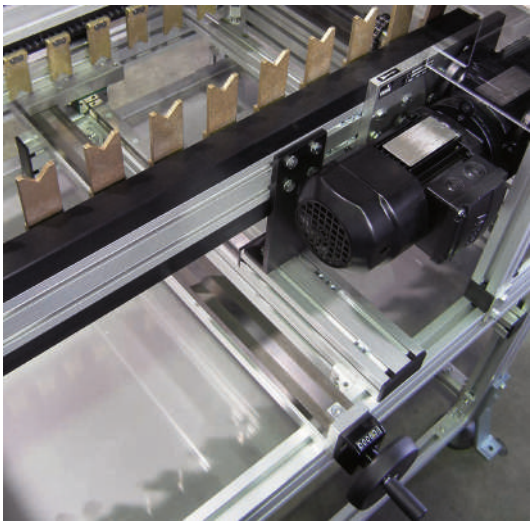
Dual VST 2015 with manual digital display for adjusting the stop bar

System 2015 adjusting units with handwheel and scale

Electromotive VST 2015 with recirculating ball bearing guide



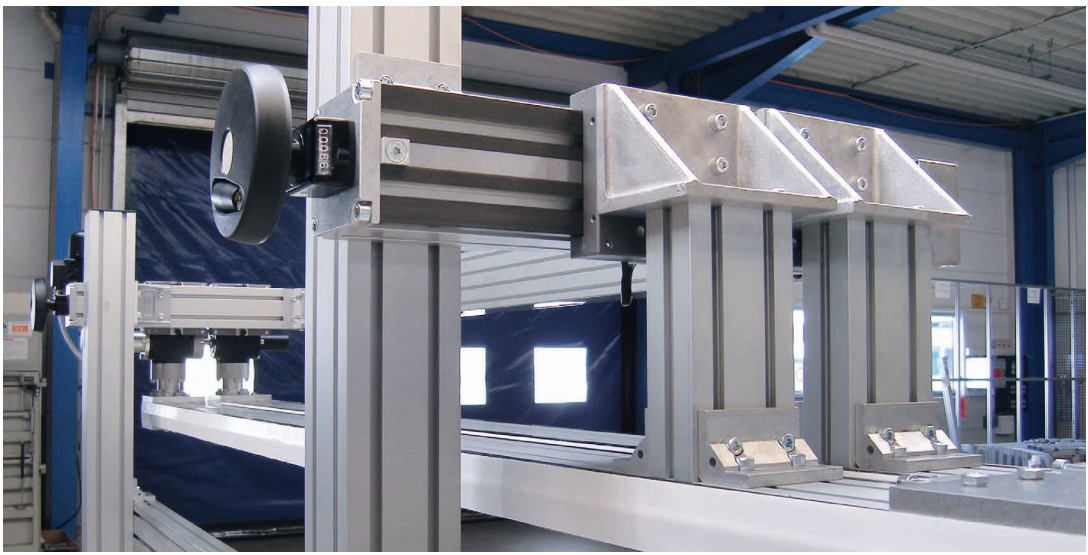
Dual electromotive VST 2015 for automatic width adjustment with scanning via safety limit switch



Dual VST 2015 with parallel recirculating ball bearing guide for supporting the load

Manual two-axis adjustment system for holding a marking device with VST 2015

Application Examples



Dual VST 2011 for manual lane width adjustment on a side conveyor

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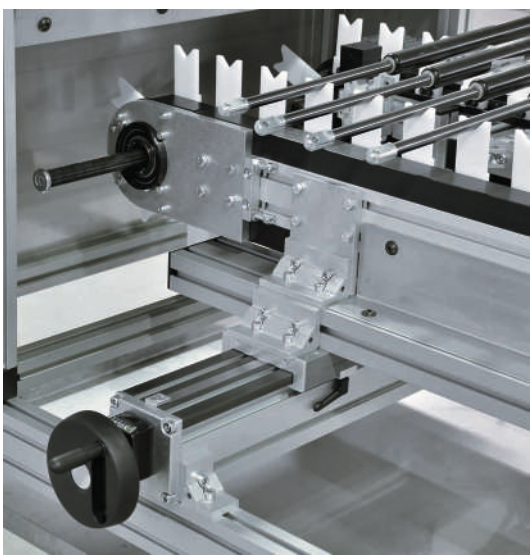
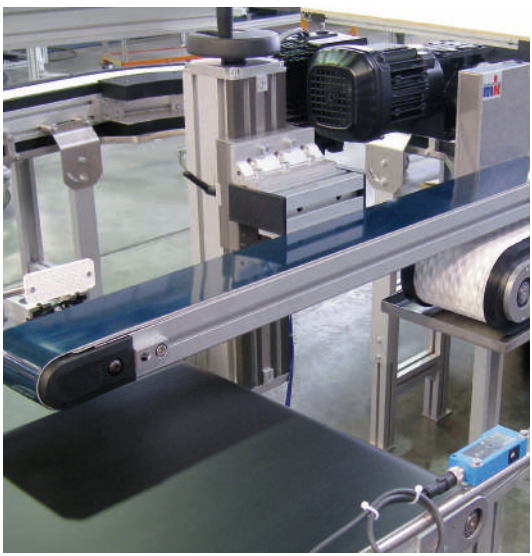


VST 2011 adjusting unit used for semi-automatic conveyor width adjustment in a chain conveyor system

Electromotive VST 2011 with custom measuring system on LZR 2005-38.44-30

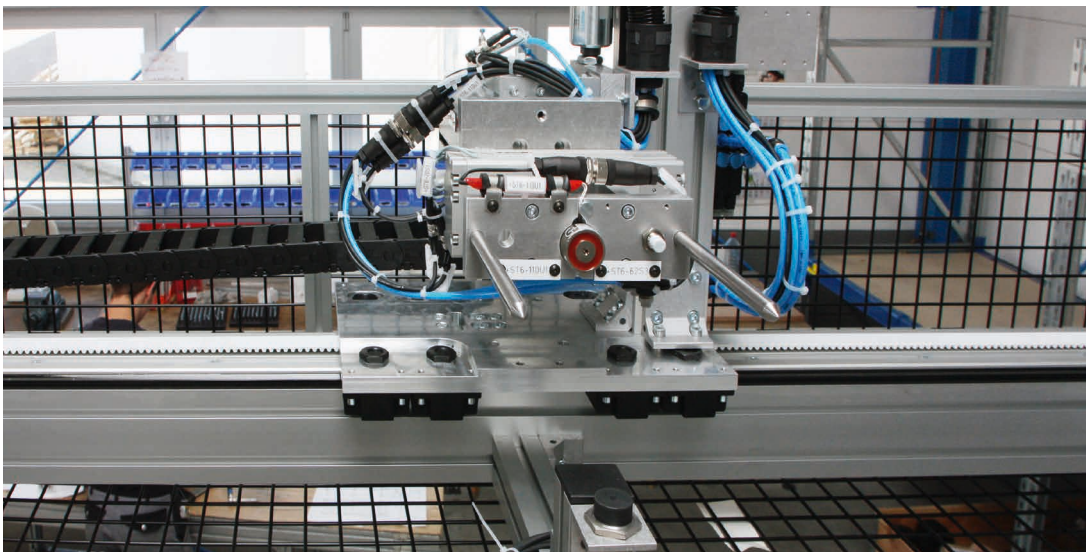
VST 2011 with two counter-rotating slide carriages and digital display for adjusting the width of the pneumatic centring unit on the modular belt conveyor



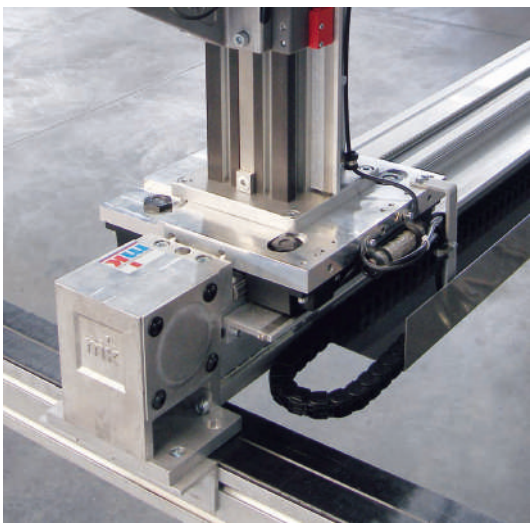
VST 2011-H with handwheel as add-on kit for the belt conveyor with incline adjustment

System mk 2011 adjusting unit for brush cantilever

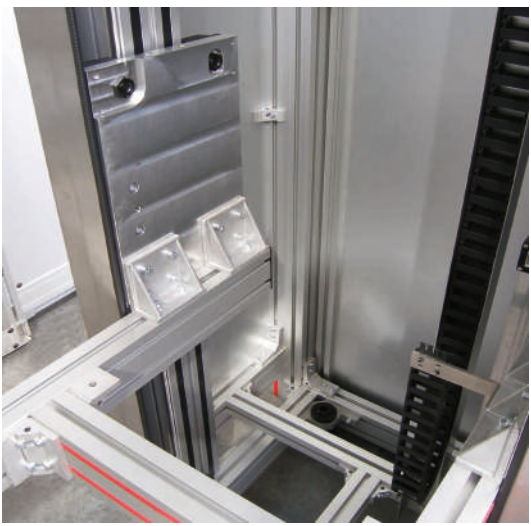
Application Examples



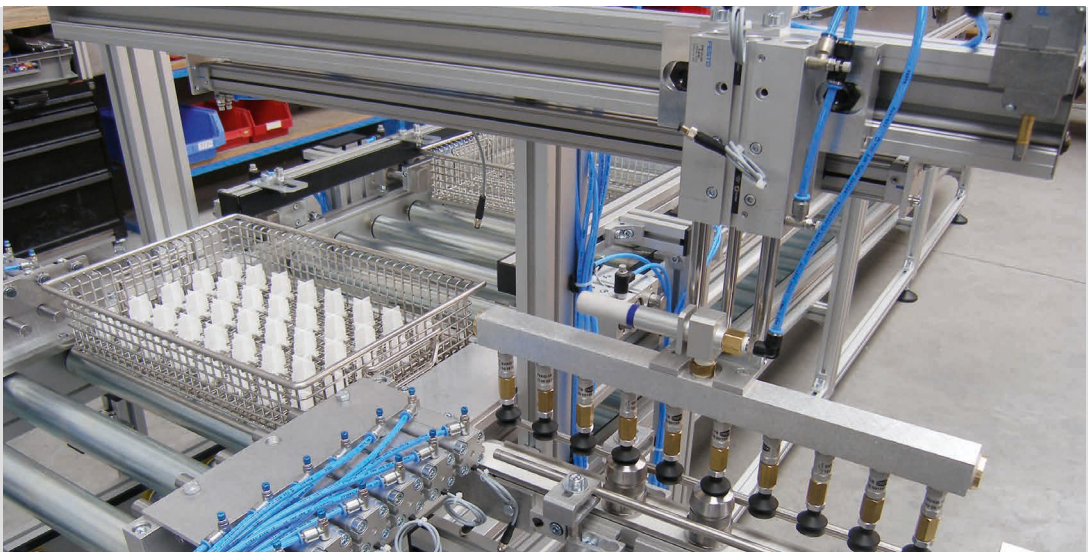
Horizontal slides comprised of linear module type LZR 2005-38.44-30 with fork grippers and swivel unit for moving and emptying workpiece baskets



Linear module type LZR 2005-38.44-30 as a direct length measuring system with measuring head on the roller carriage

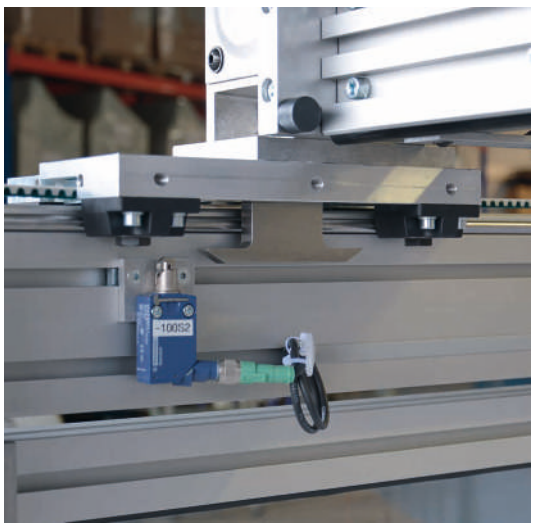


Double-LZR 2005-38.44-30 with side mounted carriage plate and cantilever for conveyor as lift



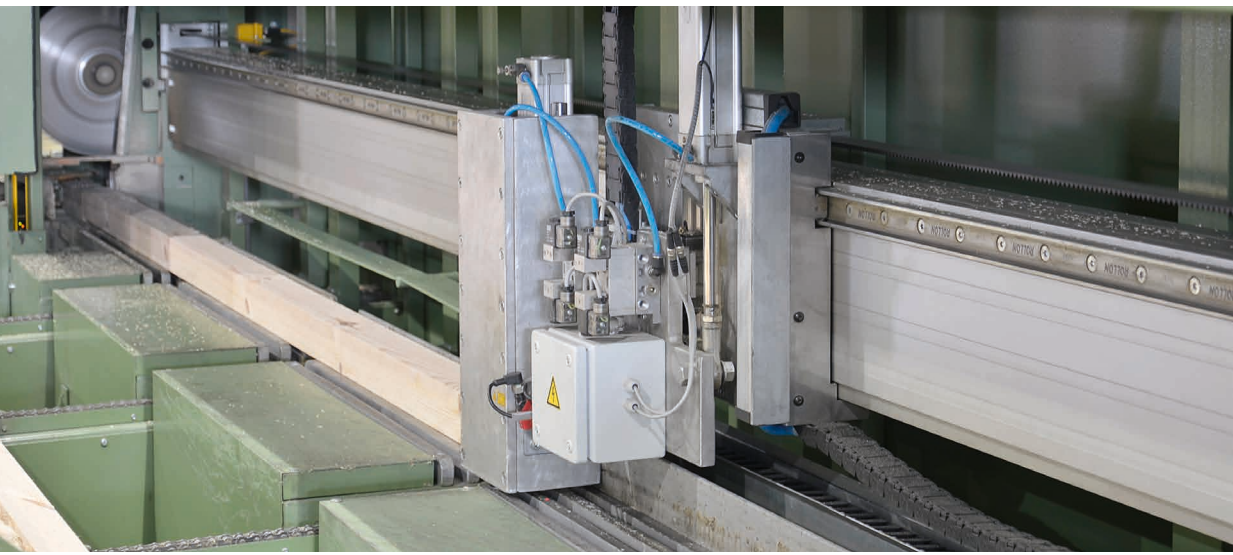
Pneumatic linear module with PF 38.77 and LW 38.77-44
as a transfer unit with 10 vacuum suction grippers

Linear unit LZR 2004-38.41-30 as a
height adjustment unit for an assembly
and testing workstation



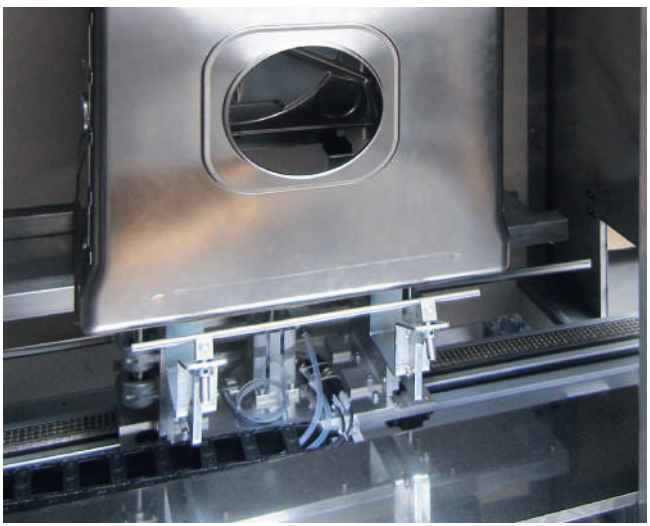
Linear unit LZR 2004-38.41-30
drive coupled via a slip clutch

Application Examples

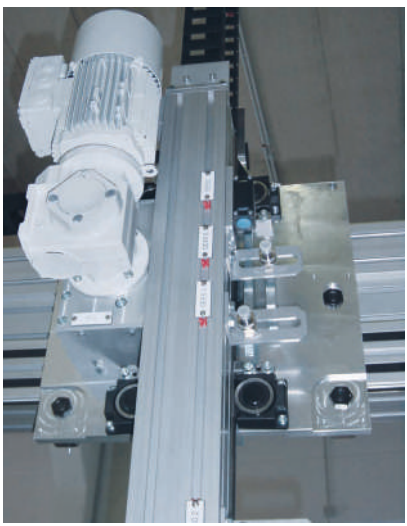


LZR Series 60 linear module based on the mk 2060.07 profile with track rollers and rails from Rollon

11

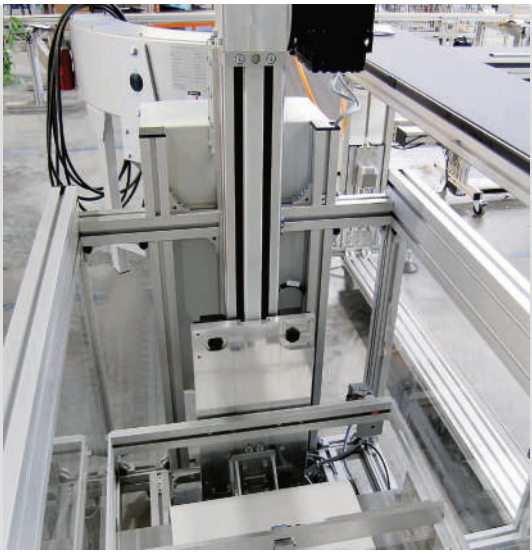


Linear module with chain for HT range and in ESD version Product intake with pneumatic lift for lifting/depositing before, in and after the oven

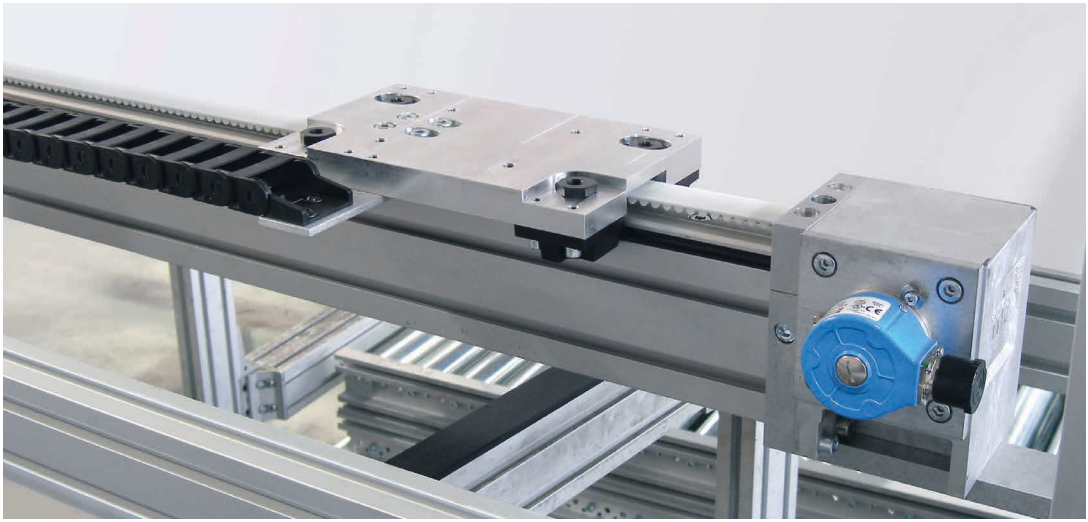


Gantry with LZR 2005 on foamed combined profile Roller carriage with support rollers as cross-carriage with LZR 2005 and Omega drive as X-Z surface gantry

Base LZR 2005-38.44-30 with side roller carriage on foamed combined profile as gantry, with support rollers for torque loads and manual VST 2011 as Z axis



Linear module type LZR 2005-38.44-30 with motor and controller as a lift with a belt conveyor



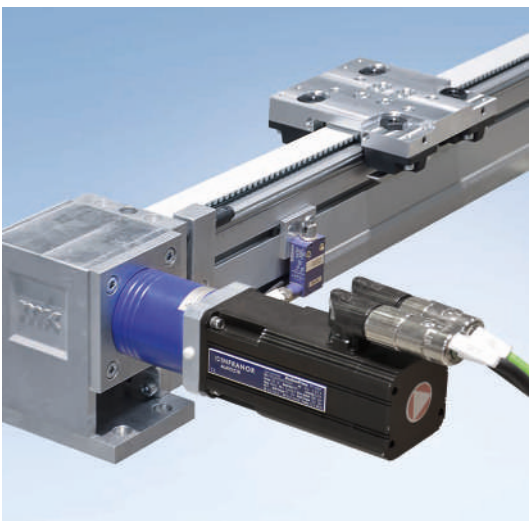
Linear module type LZR 2004-38.41-30 with absolute value rotary encoder mounted on the tail

Application Examples

Dual LZR 2005-38.44 with cantilever for dual ZRF-P 2010 for lift and transfer from a dual ZRF-P as a lift-and-transfer module

11

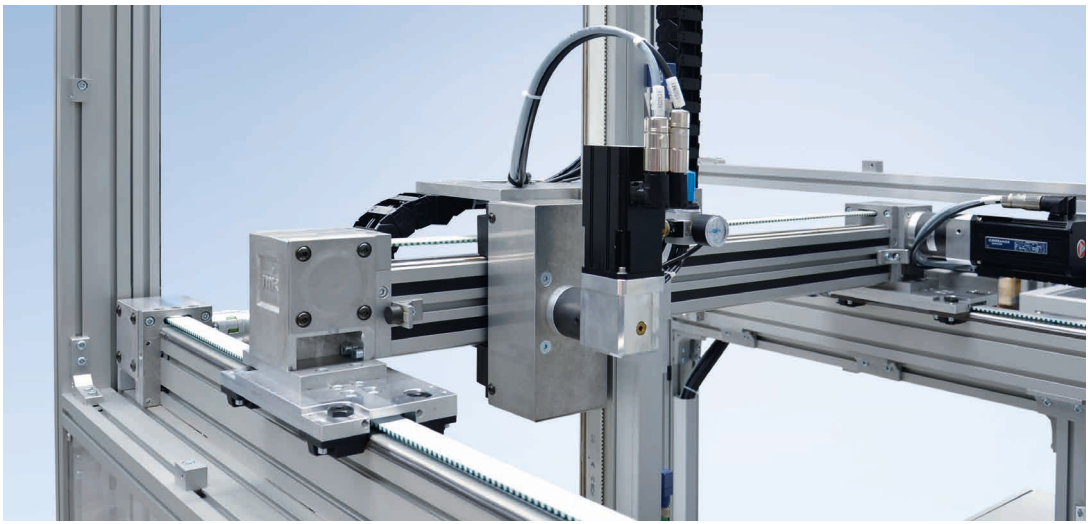
Dual-axis linear module comprising LZR 2011-38.44.30 with side mounted carriage plate



LZR 2004-38.41-30 with servo gearmotor from Infranor

Dual LZR 2005 as lift in steel rack

Dual linear module type LZR 2005-38.44-30 with cantilever for conveyor as a lifting unit



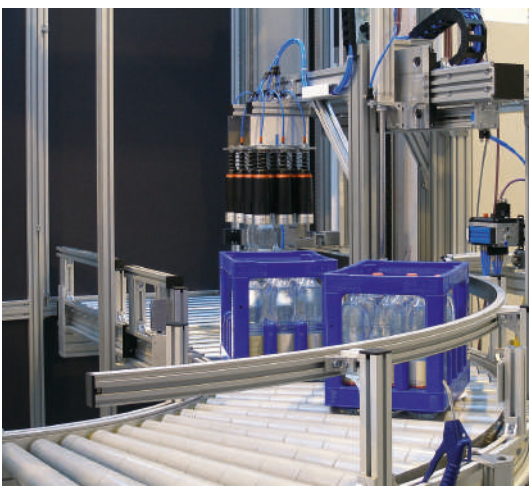
Three-axis gantry with driven linear modules, gripper and controller

Application Examples

Two-dimensional gantry with vacuum gripper as a handling and loading system for steel. Two independent loading systems on a common X axis with gear rack with track rollers and riding rack drive

11

X-Z gantry with gripper for transferring crankshafts. X axis as LZR with support roller and timing belts, Z axis with timing belt Omega drive and fall arrest

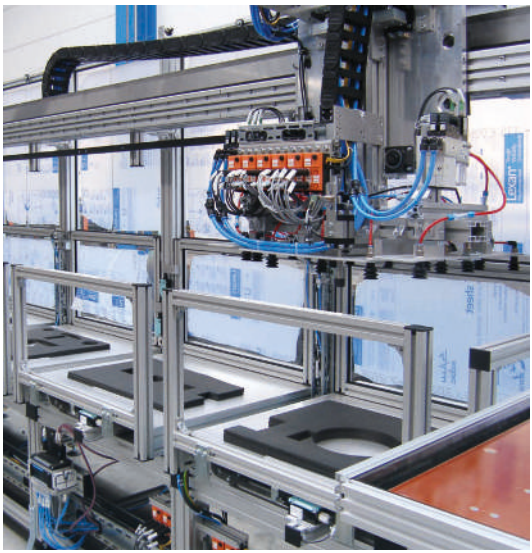


X-Z axis combination with pneumatic drive and vacuum grippers for loading and unloading beverage crates

Gantry stand with telescopic gripper unit

Horizontal axis with foamed combined profile for reinforcement

Lift for storage system



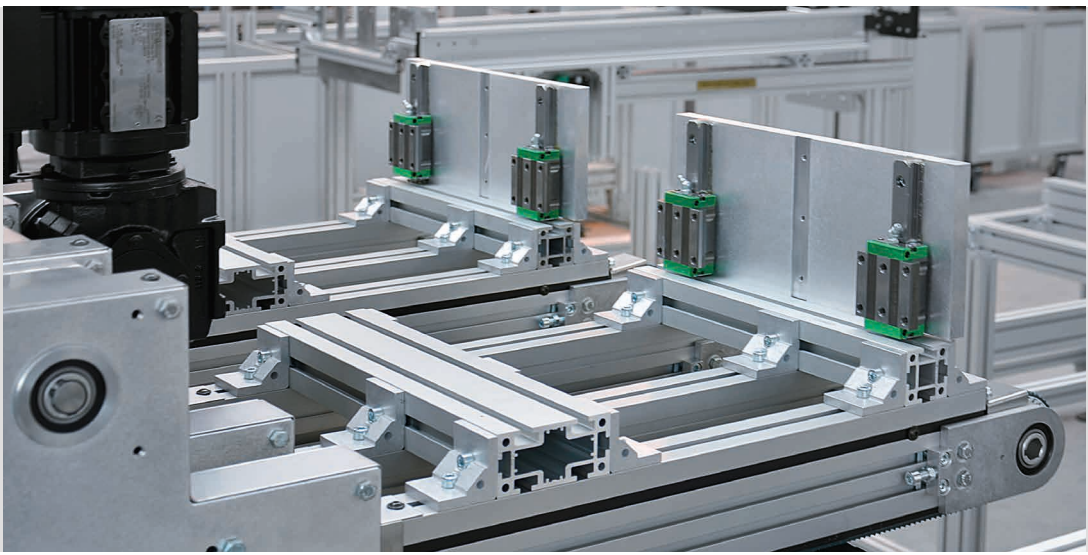
X-Z gantry with additional pneumatic weight balancing as a holder for a vacuum gripping system

Short stroke lift based on PF-38.44 linear guide system

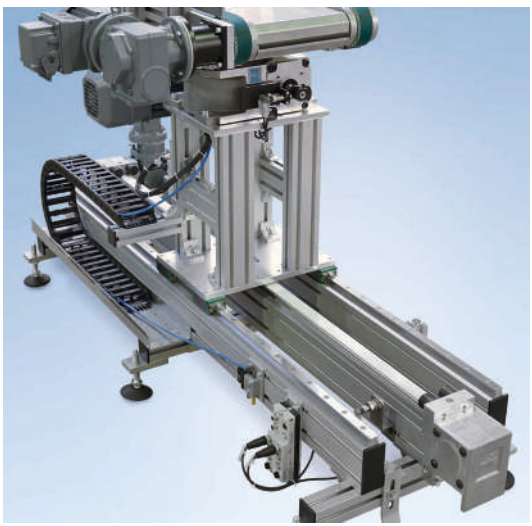
Application Examples

Lift station for lifting and lowering conveyors on two conveyor levels. Cross-conveyor unit with recirculating ball bearing guides positioned horizontally in the frame

Recirculating ball bearing guide for manual lane width adjustment and for clamping the pneumatic centring device and electromotive rotating unit



Lifting unit with KU 25 recirculating ball bearing guide and angle bracket



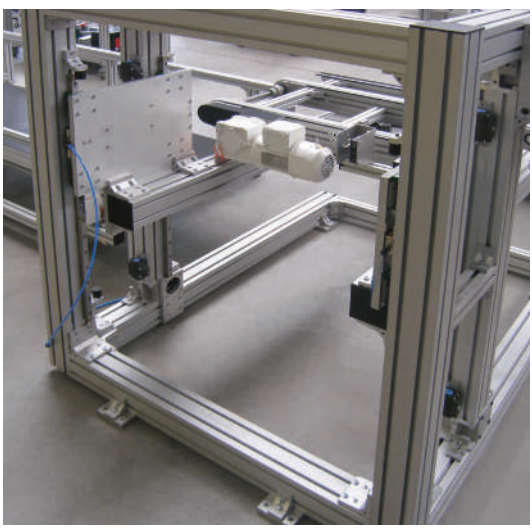
Shuttle system with rotary indexing table for pallet transport, guided via a double linear axis with recirculating ball bearing guide

Frame for stress testing based on KU 30.10 recirculating ball bearing guide

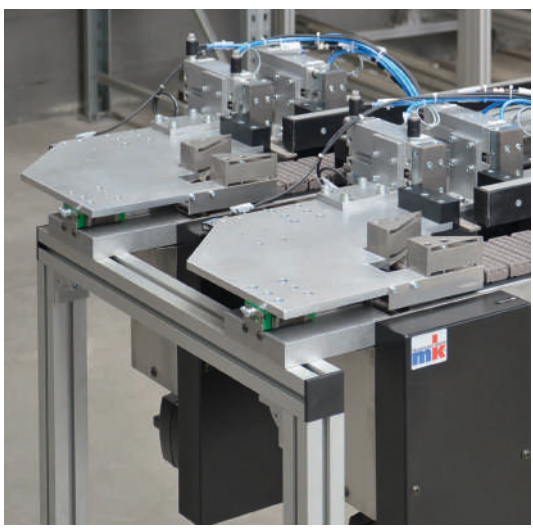
Application Examples

Gantry for handling sleeves. The X axis is moved by a dual linear module with a KU 30.30 recirculating ball bearing guide

11

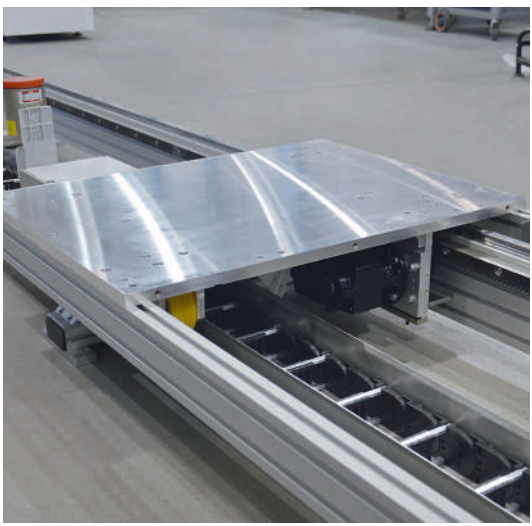


Lifting unit with LZR with recirculating ball bearing guide KU 25 with profile cantilever for supporting the ZRF-P 2010 conveyor

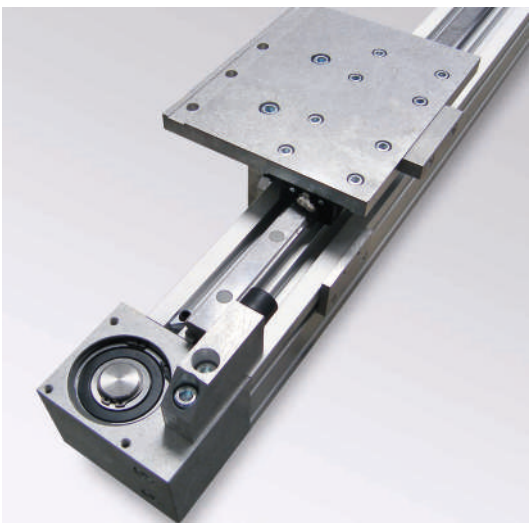


Two-track feed for machine loading. The separator can be adjusted for various diameters using a recirculating ball bearing guide

Timing chain conveyor with alignment unit for camshafts using recirculating ball bearing guide



Transfer shuttle with pallet carriers, carriage with recirculating ball bearing guide



LZR with recirculating ball bearing guide