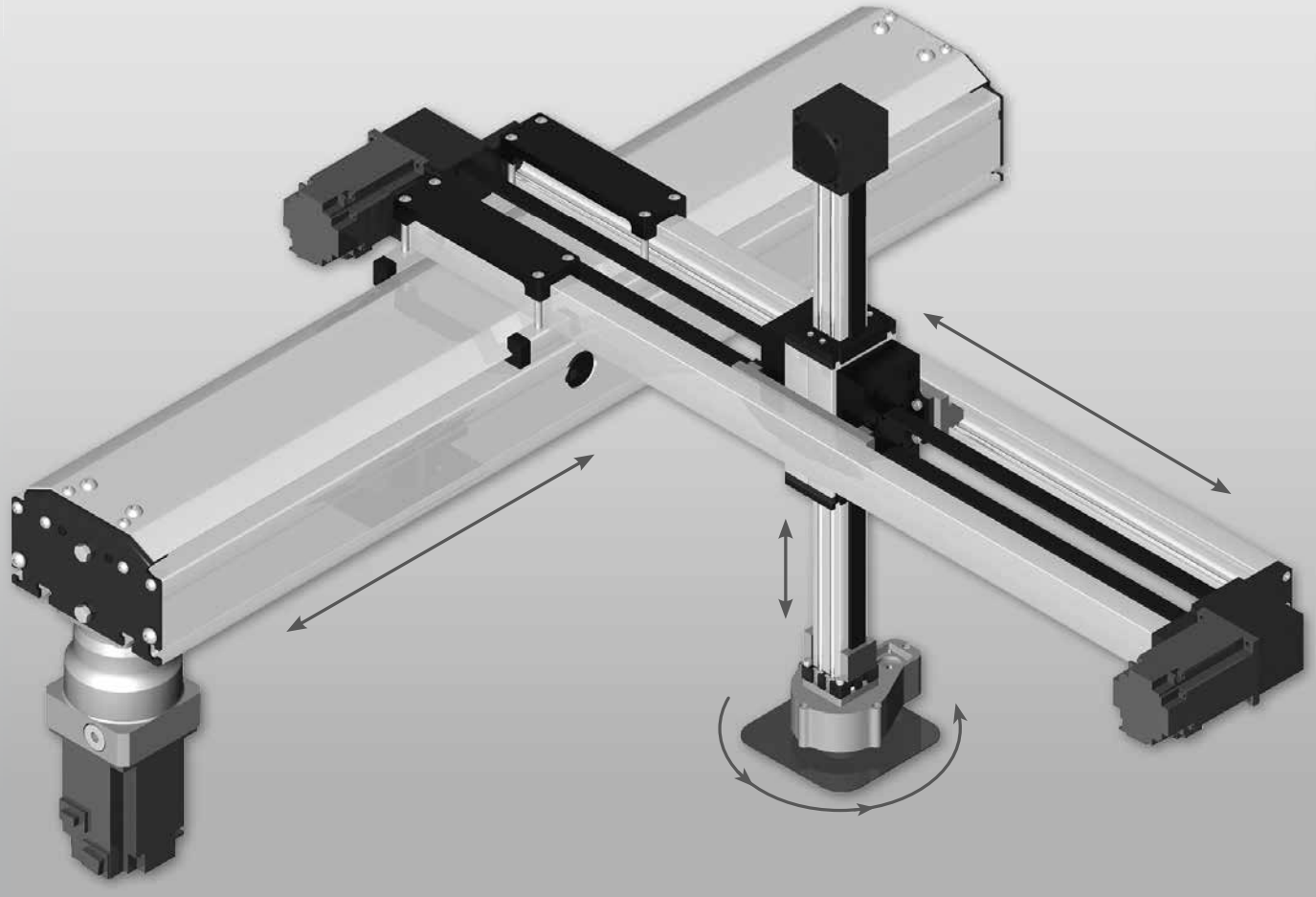
BAHR
Modultechnik

MADE IN GERMANY

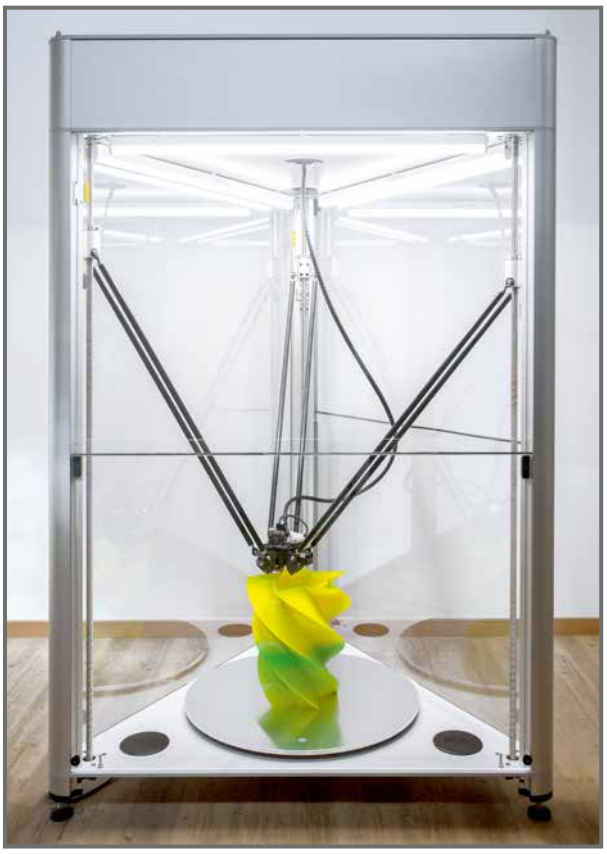
Product overview



Location of the headquarter in Luhden

The specialist for modular positioning systems

Our modular positioning systems consist of self-supporting, wear-free aluminium profiles. We offer different guide and drive systems including timing belts, ballscrew or trapezoidal thread spindles, toothed racks or linear motors according to the required application. The most important thing in this regard is to match the dynamic and load requirements as well as the path and positioning accuracy in an optimal way. There are endless variations and combination possibilities. We have the right solution for each area and sector of industry.



The competence of Bahr Modultechnik bases on skilled staff in all areas including sales, design and production as well as logistics. This ensures the highest quality standards are always met, which also leads to extremely short lead times and delivery periods.

Quality, made in Germany

LOCATION OF THE HEADQUARTER

Custom made quality products

Founded 27 years ago as a design company, our company has developed into one of world's leading full-range supplier of modular positioning systems.
We offer our customers a wide range of products and services.

Industrie Forum Design Hannover 92

Fraunhofer IPA TESTED DEVICE Lineareinheit QLZ 80 Report No. BA 0005-171

Design Award Winner 2000

product design award 2011

DESIGN AWARD 2017

PRODUCTION FACILITY

PRODUCT OVERVIEW

ALLM 203, 204

Mechanical system with roll guides outside of profile.
Driven by linear motor.

ALLR 203, 204 *non-driven*

Mechanical system with roll guides outside of profile.

Repeating accuracy: *± 0,05mm*
Velocity: *v ≤ 8 m/s*

ALLZ 203, 204

Mechanical system with roll guides outside of profile.
Belt driven

Repeating accuracy: *± 0,1mm*
Velocity: *v ≤ 5 m/s*

ALLZQ 203, 204

Mechanical system with roll guides outside of profile.
Rach and pinion driven

Repeating accuracy: *± 0,1mm*
Velocity: *v ≤ 5 m/s*

CLL 60

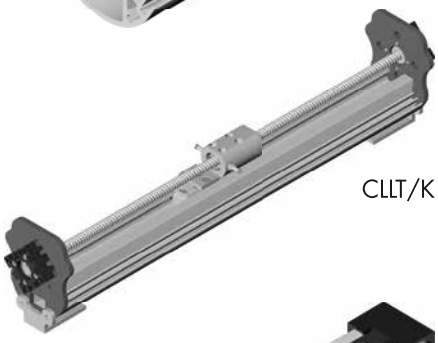
Expanded positioning system of the LL 60 series with elegantly rounded outer edges and internal roller guide. The system is driven either by highly precise threaded spindles or a timing belt.

This unit is ideal for the system build-up of housings with minimum component requirements. Developed for building large-size delta 3D printers.

The CLLT/K unit is driven either by a trapezoidal threaded spindle or a ball screw spindle. The carriage of the CLLZ system is moved by means of a revolving interior timing belt.

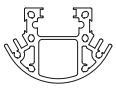
Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 6 m/s*

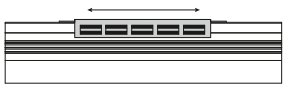
CLL



CLLT/K

CLLZ



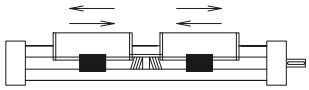


PRODUCT OVERVIEW

EGT/EGK 30, 40, 60, 80

Mechanical system with plastic prismatic guides.
System is driven by an integrated trapezoidal thread or ballscrew.

Repeating accuracy:
Trapezoidal thread: *± 0,2 mm*
Ballscrew: *± 0,025 mm*



EGTH/EGKH 40, 60, 80

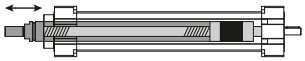
Mechanical telescopic system with plastic prismatic guides.
System is driven by an integrated trapezoidal thread or ballscrew.
Result is a telescopic movement.

Repeating accuracy:
Trapezoidal thread: *± 0,2 mm*
Ballscrew: *± 0,025 mm*

EHT/EHK 60, 80

The rotary motion of the threaded spindle is converted into a linear motion of the pressure tube. Due to the piston rod principle, high axial forces can be realised, e. g. for shelf and dosing applications.

Repeating accuracy:
Trapezoidal thread: *± 0,2 mm*
Ballscrew: *± 0,025 mm*

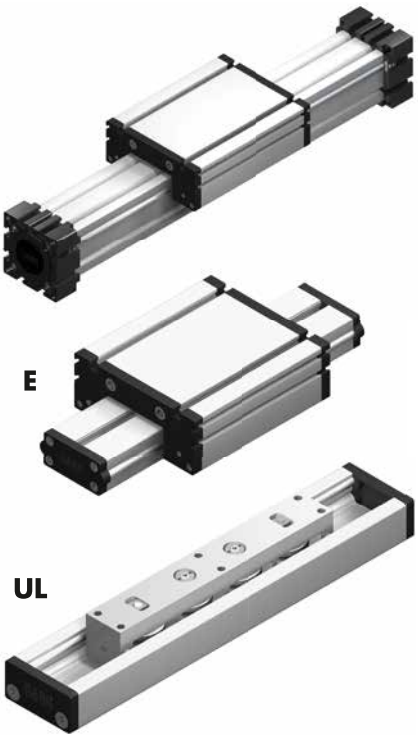


ELR 30, 40, 60, 60S, 80, 80S, 100, 125 *non-driven*
ELRZ 30, 40, 60, 60S, 80, 80S, 100, 125 *non-driven*
ER 30, 40, 60, 60S, 80, 80S, 100, 125 *non-driven*
Mechanical system with roll guides outside of profile.

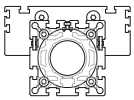
E 40, 60, 60S, 80, 80S *non-driven*
Mechanical system with roll guides outside of profile.

UL 40, 60, 80 *non-driven*
Mechanical system with roll guides inside of profile.

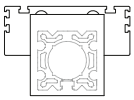
Velocity: *v ≤ 10 m/s*



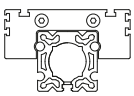
ELR



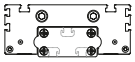
ELRZ



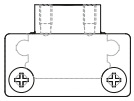
ER



E



UL

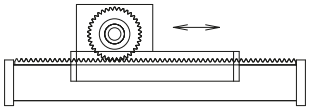


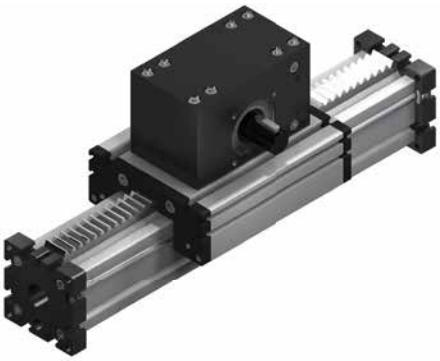
PRODUCT OVERVIEW

ELZA 40
ELDZA 60, 60S, 80, 80S, 100

Same function as ELSZ. A rack is mounted onto the leading profile. A pinion gear is fitted to the carriage.

Repeating accuracy: ± 0,2 mm
Velocity: v ≤ 3 m/s





ELFZ 60S, 80S, 100, 125

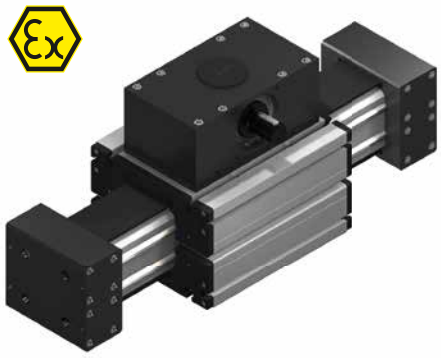
Special lifting system with roll guides outside of profile. System is driven by one rotating timing belt with one drive. The function corresponds to a simple pulley block.

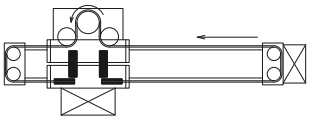
Repeating accuracy: ± 0,1 mm
Velocity: v ≤ 4 m/s

ELFZex 60S, 80S, 100, 125

Special lifting system with roll guides outside of profile. System is driven by one rotating timing belt with one drive. The function corresponds to a simple pulley block. This system is additionally ATEX 2014/34/EU certified.

Repeating accuracy: ± 0,1 mm
Velocity: v ≤ 1 m/s

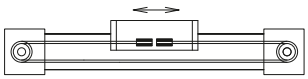




ELHZ 60, 60S, 80, 80S, 100, 125

Mechanical system with roll guides outside of profile.
System is driven by an internal belt. Position of shaft is horizontal to the carriage.

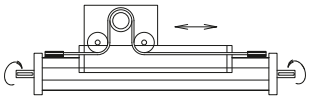
Repeating accuracy: ± 0,1 mm
Velocity: v ≤ 8 m/s

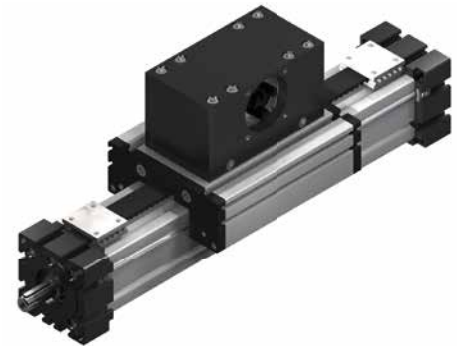


ELSD 40, 60, 60S, 80, 80S, 100

Same function as ELSZ. An additional turning shaft is integrated into the leading profile. Grippers and other components can be adapted to the shaft.

Repeating accuracy: ± 0,1 mm
Velocity: v ≤ 6 m/s



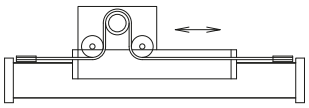


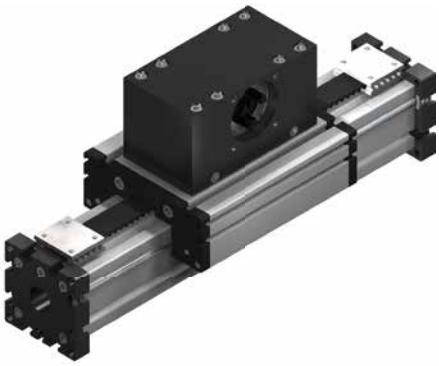
PRODUCT OVERVIEW

ELSZ 30, 40, 60, 60S, 80, 80S, 100, 125

Same function as ELZ, but with driven carriage.

Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 6 m/s*

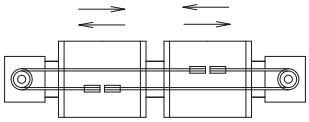




ELVZ 60, 60S, 80, 80S, 100, 125

Mechanical system with roll guides outside of profile.
System is driven by an internal belt. Position of shaft is vertical to carriage.

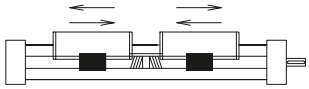
Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 8 m/s*



ELT/ELK 30, 40, 60, 60S, 80, 80S, 100, 125

Mechanical system with roll guides outside of profile.
System is driven by an integrated trapezoidal thread or ballscrew.

Repeating accuracy:
Trapezoidal thread: *± 0,2 mm*
Ballscrew: *± 0,025 mm*

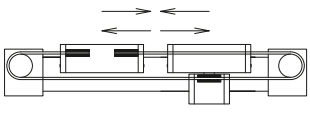


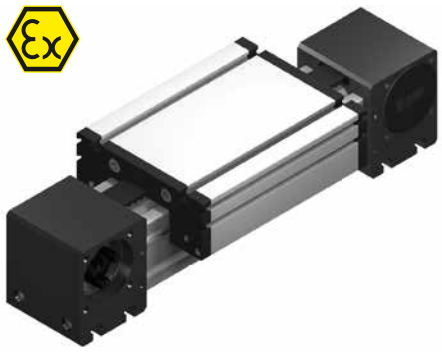
ELZ/ELZex 30, 40, 60, 60S, 80, 80S, 100, 125

Mechanical system with roll guides outside of profile. System is belt driven. ELZex like ELZ. The positioning system is suitable for use according to the intended purpose in potentially explosive areas (see ATEX 2014/34/EU marking).

Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 10 m/s*
(ELZex: v ≤ 1m/s)

Variation for ELZ

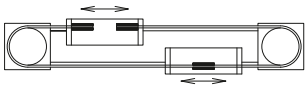




ELZG 30, 40, 60, 60S, 80, 80S

Mechanical system with 2 roll guides outside of profile. System is driven by one rotating timing belt. At each end of this belt a carriage is fixed. Result is two carriages moving in opposite direction over the complete length of the leading the profile.

Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 10 m/s*

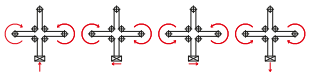


PRODUCT OVERVIEW

ELZI 30, 40, 60

X/Z gantry consisting of a double guide in the horizontal X level and a vertical Z axis. The unit is driven by a rotating belt, which remains connected through various deflection points.

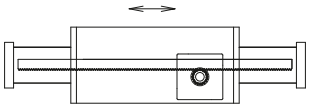
Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 5 m/s*



ELZQ 60, 80, 80S

Special lifting unit with function as ELZA. High dynamic and accuracy is achieved by a precision rack and pinion.

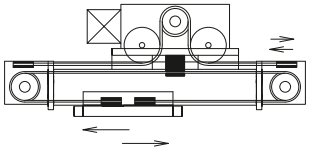
Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 3 m/s*

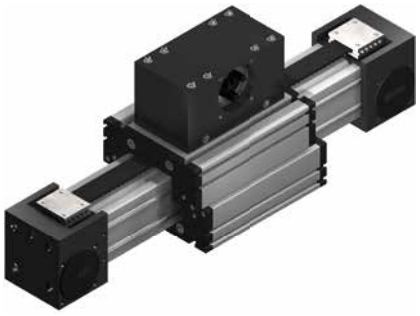


ELZT 40, 60, 60S, 80, 80S, 100

Same function as ELZ. Two carriages are moving in different directions. Result is a telescopic movement.

Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 6 m/s*

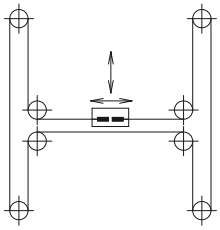




ELZU 30, 40, 60, 60S, 80, 80S, 100

Surface portal, consisting of 2 Y-axes and 1 X-axis, driven by one rotating belt. This belt runs around different deflection pulleys. Positioning is achieved by two motors. The coordinate is diagonal to the deflection points of the Y-axes.
Advantage: Only small masses are moved, so that high acceleration can be realized.

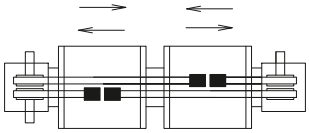
Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 6 m/s*
Acceleration: *max. 20 m/sec²*



ELZZ 60, 60S, 80, 80S, 100, 125

Same function as ELZ, but each carriage with separate drive. Divided pulleys have separate bearings, so two parallel moving belts are connected each with one carriage.

Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 5 m/s*



PRODUCT OVERVIEW

DLM/DLVM 120, 160, 200

Mechanical system with double roll guides inside of profile. Driven by linear motor.

Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 8 m/s*

DLR 120, 160, 200 *non-driven*

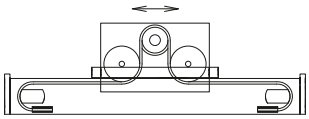
Mechanical system with double roll guides inside of profile.

Velocity: *v ≤ 6 m/s*

DLSZ 120, 160, 200

Mechanical system with roll guides inside of profile.
Same function as DLZ but with driven carriage.

Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 6 m/s*

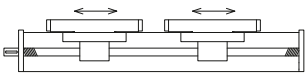


DLT/DLK 120, 160, 200

Mechanical system with double roll guides inside of profile.
System is driven by an integrated trapezoidal thread or ballscrew.

Repeating accuracy:
Trapezoidal thread: *± 0,2 mm*
Ballscrew: *± 0,025 mm*

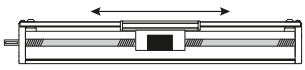
Variation



DLT/DLK 120 P, 160 P, 200 P

Mechanical system with double roll guides inside of profile.
System is driven by an integrated trapezoidal thread or ballscrew.
A special curved aluminium sheet is covering the carriage side.

Repeating accuracy:
Trapezoidal thread: *± 0,2 mm*
Ballscrew: *± 0,025 mm*

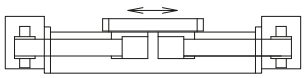


PRODUCT OVERVIEW

DLVZ 120, 160

Mechanical system with roll guides inside of profile.
System is driven by an internal belt.
Position of shaft is vertical to carriage.

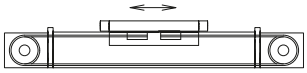
Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 6 m/s*



DLZ 120, 160, 200

Mechanical system with roll guides inside of profile.
System is driven by an internal belt.

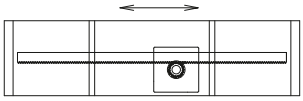
Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 6 m/s*



DLZA 120, 160, 200

Rack and pinion system for high dynamic operations.

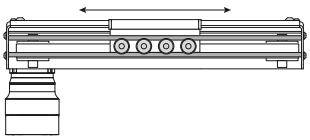
Repeating accuracy: *± 0,2 mm*
Velocity: *v ≤ 3 m/s*



DLZPVI 120, 160, 200

This unit consists of a rectangular aluminium profile with 2 integrated roller guides. The carriage is moved by a belt drive. On the drive side the pulley is beared on the shaft of a planetary gear. A special curved aluminium sheet is covering the carriage side.

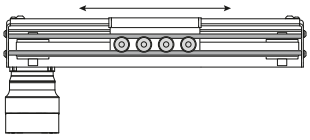
Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 6 m/s*



DLZPVIE 120, 160, 200

This unit consists of a rectangular aluminium profile with 2 integrated roller guides. The carriage is moved by a belt drive. On the drive side the pulley is beared on the shaft of a planetary gear. A special curved aluminium sheet is covering the carriage side. Enclosed with a stainless steel casing and components.

Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 6 m/s*

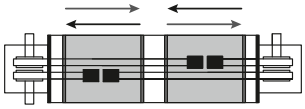


PRODUCT OVERVIEW

DLZZ 120, 160, 200

Mechanical system with roll guides inside of profile. Each carriage with separate drive. Divided pulleys have separate bearings, so two parallel moving belts are connected each with one carriage.

Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 6 m/s*



DSB 200

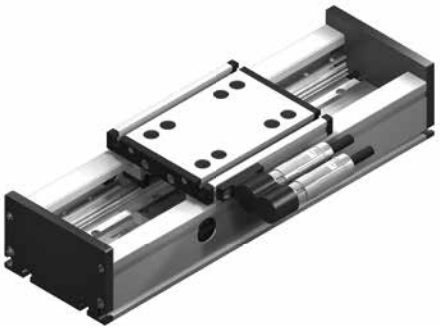
Mechanical system with a double integrated ball rail inside of profile, wich can absorbed the high moments. The drive is a highly dynamic short stroke linear motor.

Repeating accuracy: *± 0,05 mm*
Velocity: *mass dependent*

DSM 160, 200

Mechanical system with a double integrated ball rail inside of profile. Driven by linear motor.

Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 8 m/s*

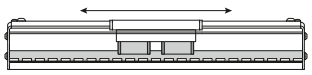


DSM 160P

Mechanical system with a double integrated ball rail inside of profile. Driven by linear motor, but with a covered guide profile.

Repeating accuracy: *± 0,02 mm*
Velocity: *v ≤ 6 m/s*

COLANDIS
the clean air company



DSR 120, 160, 200 *non-driven*

Mechanical system with a double integrated ball rail inside of profile.

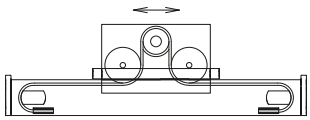
Velocity: *v ≤ 6 m/s*

PRODUCT OVERVIEW

DSSZ 120, 160, 200

Mechanical system with a double integrated ball rail inside of profile. Same function as DSZ but with driven carriage.

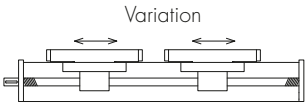
Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 6 m/s*

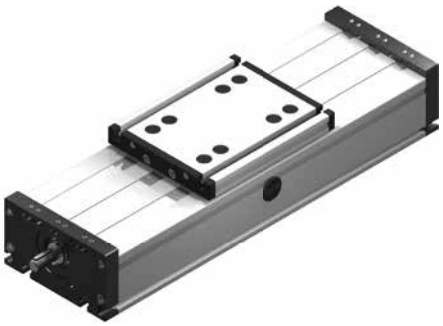


DST/DSK 120, 160, 200

Mechanical system with a double integrated ball rail inside of profile. System is driven by an integrated trapezoidal thread or ballscrew.

Repeating accuracy:
Trapezoidal thread: *± 0,2 mm*
Ballscrew: *± 0,025 mm*

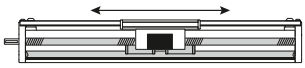




DST/DSK 120 P, 160 P, 200 P

This unit consists of a rectangular aluminium profile with 2 integrated rail guides. The carriage is driven by means of a rotating spindle with leading nut. A special curved aluminium sheet is covering the carriage side.

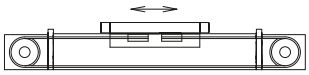
Repeating accuracy:
Trapezoidal thread: *± 0,2 mm*
Ballscrew: *± 0,025 mm*

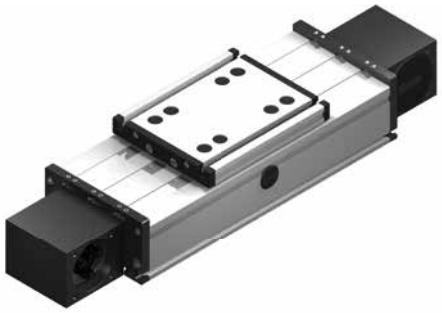


DSZ 120, 160, 200

Mechanical system with a double integrated ball rail inside of profile. System is driven by an internal belt.

Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 6 m/s*

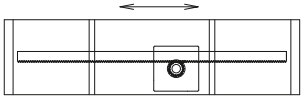




DSZA 160, 200

Mechanical system with a double integrated ball rail inside of profile. The carriage is driven by a pinion on a high precision rack. The rack and pinion system is suitable for highly dynamic servo operation and ideal for lifting movements. The pinion is equipped with maintenance-free ball bearings.

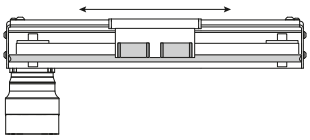
Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 5 m/s*



DSZPVI 120, 160, 200

Mechanical system with a double integrated ball rail inside of profile. System is driven by an internal belt. One pulley is beared on a planetary gear shaft.

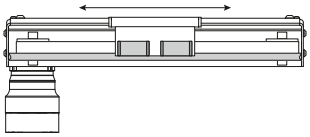
Repeating accuracy: ± 0,1 mm
Velocity: v ≤ 6 m/s



DSZPVIE 120, 160, 200

Mechanical system with a double integrated ball rail inside of profile. System is driven by an internal belt. One pulley is beared on a planetary gear shaft. Enclosed with a stainless steel casing and components.

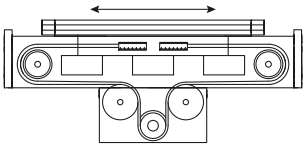
Repeating accuracy: ± 0,1 mm
Velocity: v ≤ 6 m/s



DSZS 120, 160, 200

Same funktion as DSSZ but with fixed drive under the profile.

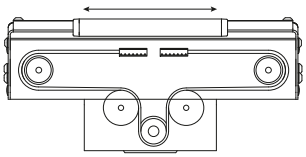
Repeating accuracy: ± 0,1 mm
Velocity: v ≤ 6 m/s



DSZS 120 P, 160 P, 200 P

Mechanical system with a double integrated ball rail inside of profile and with fixed drive under the profile. A special curved aluminium sheet is covering the carriage side.

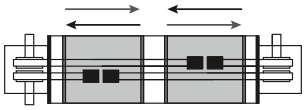
Repeating accuracy: ± 0,1 mm
Velocity: v ≤ 6 m/s



DSZZ 120, 160, 200

Mechanical system with a double integrated ball rail inside of profile. Each carriage with separate drive. Divided pulleys have separate bearings, so two parallel moving belts are connected each with one carriage.

Repeating accuracy: ± 0,1 mm
Velocity: v ≤ 6 m/s

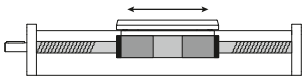


PRODUCT OVERVIEW

GGT / GGK 90

Spindle axis for wheelchair lifting systems, lifting platforms and other lifting applications. Mechanical linear unit with two internal sliding guides. The carriage is moved by means of a rotating thread spindle with an assigned follower nut. The openings in the guide body are closed by a plastic cover band.

Repeating accuracy:
Trapezoidal thread: *± 0.2 mm*
Ball screw: *± 0.025 mm*

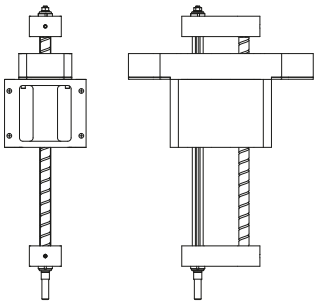


DESIGN AWARD 2017

HDT/K 16

Combined lifting/rotating unit, for sorting light-weighted components very quickly.

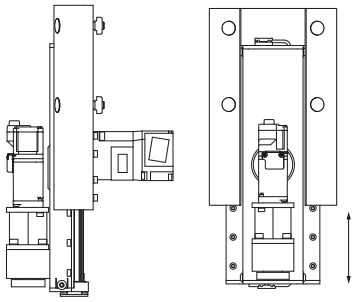
Repeating accuracy: *± 0,1 mm*



HDU 12

Mechanical lifting/rotating unit with two profile rails. High Torque capability by use of four runner blocks. The power is transmitted by an internal toothed belt.

Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 1 m/s*



LLZ 60, 80

The guide body consists of an aluminium square profile, with an integrated roller guide. The carriage is moved by means of an internal rotating toothed belt.

Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 6 m/s*

LLZE 60

Function like LLZ 60, but with a stainless steel casing and components.

Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 6 m/s*

PRODUCT OVERVIEW

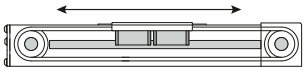
LSZ 60, 80

The guide body consists of an aluminium square profile, with an integrated rail guide. The carriage is moved by means of an internal rotating toothed belt.

LSZ 60, 80 HP

Function like LSZ. Positioning system with very high accuracy.

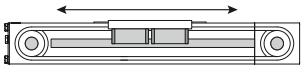
Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 6 m/s*



LSZE 60

The guide body consists of an aluminium square profile, with an integrated rail guide. The carriage is moved by means of an internal rotating toothed belt. With a stainless steel casing and components.

Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 6 m/s*



LLR 60, 80 *non-driven*

Mechanical system with roll guides.

LSR 60, 80 *non-driven*

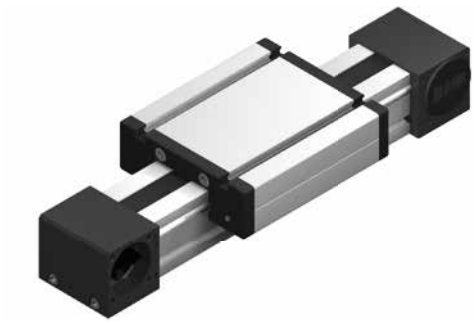
Mechanical system with an integrated ball rail inside of profile.

Velocity: *v ≤ 6 m/s*

MLZ 60, 60S, 80, 80S, 100

Mechanical system with roll guides outside of profile.
The system is driven by a belt that is guided inside the profile.

Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 8 m/s*



QLR 60, 80, 100 *non-driven*

Mechanical system with roll guides inside of profile.

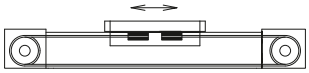
Velocity: *v ≤ 6 m/s*

PRODUCT OVERVIEW

QLZ 60, 80, 100

Mechanical system with roll guides inside of profile. System is driven by a belt which is guided within the profile.
This unit is suitable for cleanroom applications (Clean room classification: VDI 2083, class 4; ISO 14644-1, class 6; US Federal Standard 209E, class 1.000

Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 6 m/s*

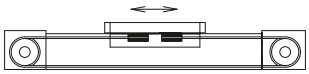


QLZE 60, 80, 100

Like QLZ, but enclosed with a stainless steel casing and components.

Fraunhofer IPA TESTED DEVICE
Lineareinheit QLZ 80
Report No. BA 0005-171

Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 4 m/s*



QSR 60, 80, 100, 125 *non-driven*

Mechanical system with an integrated ball rail inside of profile.

Velocity: *v ≤ 6 m/s*

QSRZ 60, 80, 100, 125 *non-driven*

Same function as QSZ, but without drive.

Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 6 m/s*

QSSR 60, 80, 100 *non-driven*

Mechanical system with an integrated ball rail inside of profile.

Velocity: *v ≤ 6 m/s*

PRODUCT OVERVIEW

QSSZ 60, 80

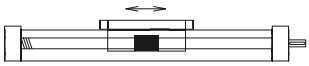
Same function as QSZ, but with driven carriage.

Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 6 m/s*

QST/QSK 60, 80, 100

Mechanical system with an integrated ball rail inside of profile. System is driven by an integrated trapezoidal thread or ballscrew.

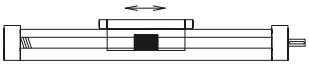
Repeating accuracy:
Trapezoidal thread: *± 0,2 mm*
Ballscrew: *± 0,025 mm*



QST/KE 60, 80, 100

Like QST/K, but enclosed with a stainless steel casing and components.

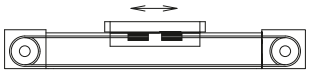
Repeating accuracy:
Trapezoidal thread: *± 0,2 mm*
Ballscrew: *± 0,025 mm*



QSZ 60, 80, 100, 125

Mechanical system with an integrated ball rail inside of profile. System is driven by a timing belt which is guided within the profile.

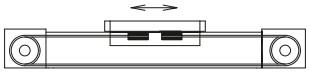
Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 6 m/s*

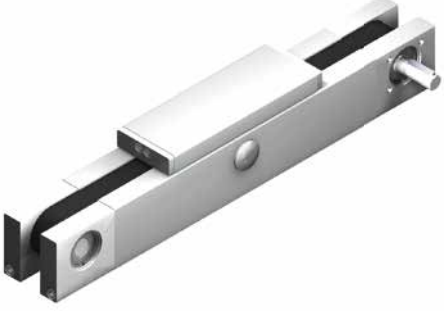


QSZE 60, 80, 100

Like QSZ, but enclosed with a stainless steel casing and components.

Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 4 m/s*



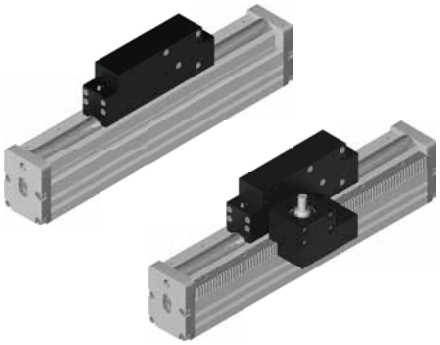


PRODUCT OVERVIEW

SLTR/SLTZA 30, 50

Heavy Duty Traverse without drive (SLTR) and with rack and pinion drive (SLTZA).

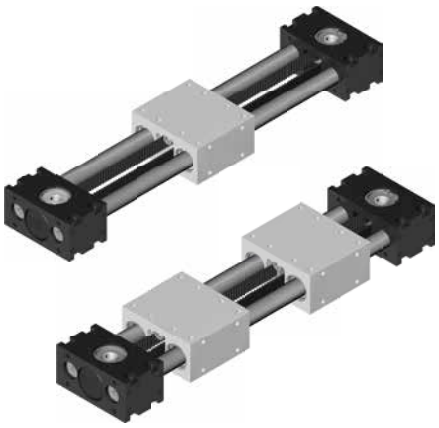
Repeating accuracy: *± 0,1mm*
Velocity: *v ≤ 5 m/s*

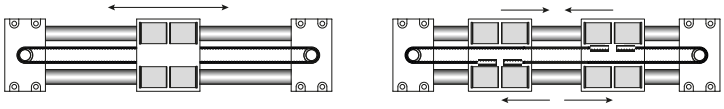


WGVZ / WKVZ 16

This positioning system is guided either by means of ball bushings (WKVZ) or sliding bushings (WGVZ). The carriage is moved by means of a revolving vertical timing belt. The open arrangement ensures that no dirt can accumulate in the interior parts. Optionally, the unit is also available with two carriages (right/left).

Repeating accuracy: *± 0,1 mm*
Velocity: *v ≤ 10 m/s*

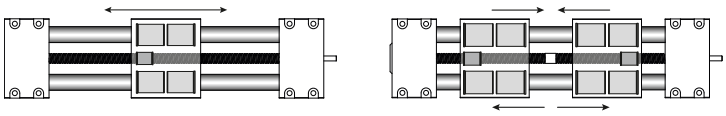




WGT/K / WKT/K 16

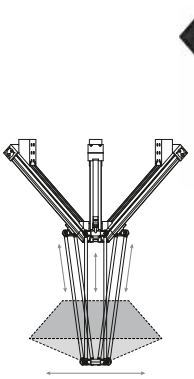
This positioning system is guided either by means of ball bushings (WK) or sliding bushings (WG). The carriage is moved by means of a rotating thread spindle. The open arrangement ensures that no dirt can accumulate in the interior parts. Optionally, the unit is also available with two carriages (right/left).

Repeating accuracy:
Trapezoidal thread: *± 0,2 mm*
Ballscrew: *± 0,025 mm*



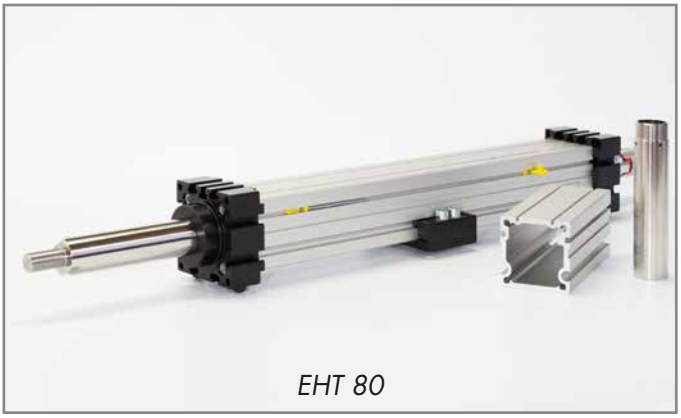
TRIPOD

The parallel kinematics based on the interaction of three belt-driven positioning axes of the **LSZ** series.
The clevis arms, which are made of a light-weight, highly robust carbon fi bre plastic or aluminium, are mounted directly to the carriages of the axes by means of joints. Thanks to their special dimensions and due to the use of only one belt defl ection unit, the carriages can be moved along nearly the whole length of the aluminium square profi les and thus achieve an increased degree of freedom of the rod mechanics.



CLL 60

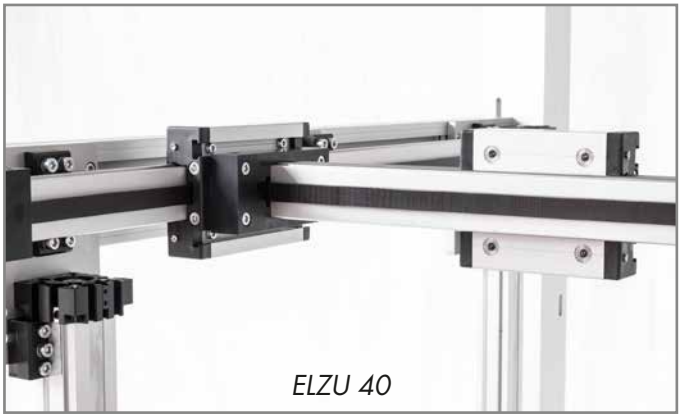
GGT 90



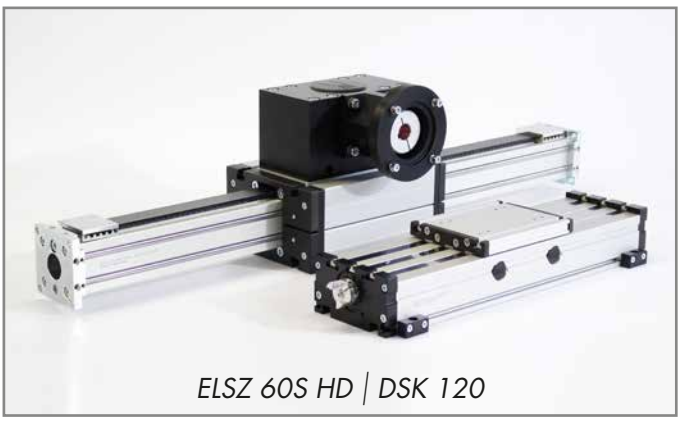
EHT 80

EGT 40 R-L | DLT 160

QLZE | QSZE



ELZU 40



ELSZ 60S HD | DSK 120

ELK 100 | ELR 40

BAHR Modultechnik

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Product overview
BV5000276