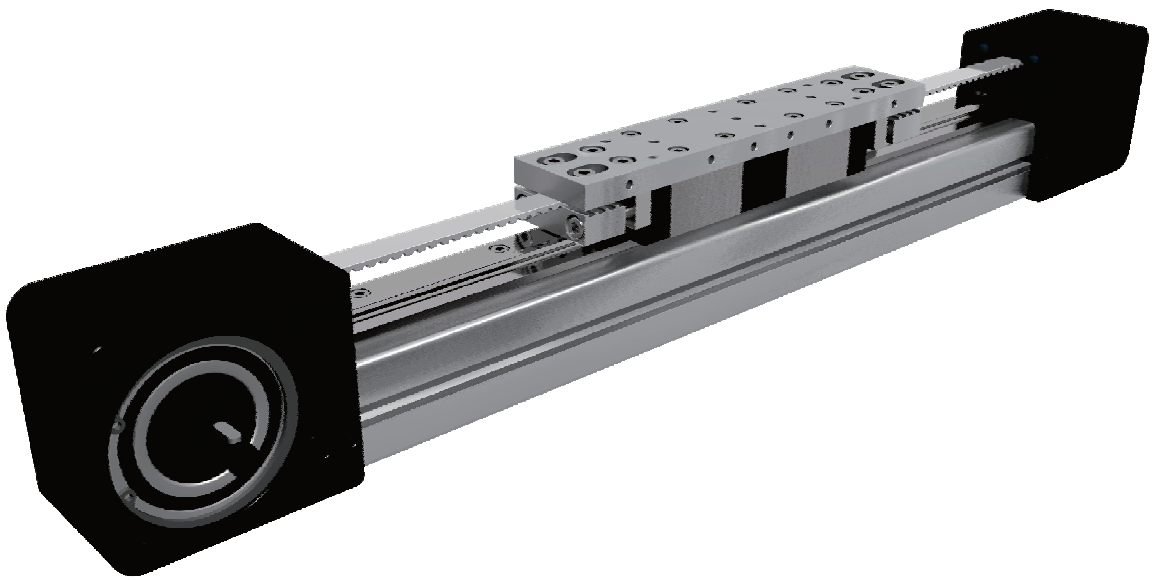
CHARACTERISTICS / *EIGENSCHAFTEN*

MTJ ECO series is a high performance and low cost type of linear unit with a tooth belt drive and zero-clearance Ball rail system for simple and precise linear movements. These Linear unit can also be combined to various multi-axes linear systems and ensure an excellent price/performance ratio with short delivery time.
An extruded aluminium profile of hard anodized Al 6063 alloy with a mounted zero-clearence Ball rail system enables high load moments and optimum running to move large loads at high speed. Aluminum profile contains T-slots for actuator and proximty switch fixing.
Linear Unit MTJ ECO uses a pre-tensioned AT polyurethane tooth belt with steel tension cords. This type of linear belt is used together with a Zero-backlash pully to achive an excellent precision, high load transmission with dimensional stability, low noise and low wear.
Different carriage lengths with side fixing holes enable an easy mounting of various accessories.
MTJ ECO is available with already pre-designed adapters for attachment of motor and gear reducer in various directions.

MTJ ECO시리즈는 타이밍밸트로 구동되는컴팩트한 구조로 가격 경쟁력을 갖춘 제품으로은 강성,고속,고정밀한 품질을 갖고 있다.
또한 다양하게 조합하여 다축구성이 용이한 구조이며, 성능대비 훌륭한 가격과 빠른 납기를 제공합니다.
고정밀한 알루미늄 프로파일은 하드아노다이징되어 있고, 그에 장착된 zero-clearence ball rail시스템은 고속으로 고하중을 운반하는데 최적화되어 있습니다.

프로파일의 T슬롯을 이용 유니트의 고정, 스위치의 장착이 용이합니다.
AT타입의 타이밍벨트는 zero backlash풀리와 더불어 정밀하고 큰 부하의 전달을 안정적으로 수행하도록 하며, 소음과 마모를 아주 적게 만듭니다.

캐리지는 2가지 길이로 공급되며, 다양한 부품장착이 가능합니다.
다양한 모타 또는 감속기를 취부가능하도록 adapter를 공급하고 있습니다.



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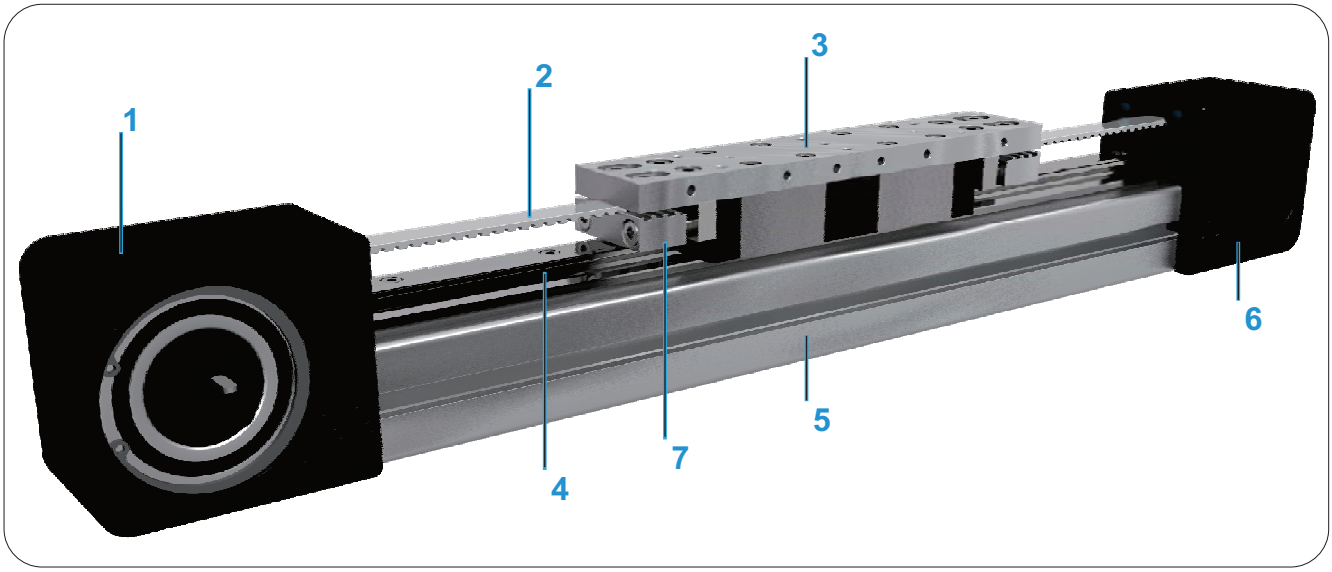
STRUCTURAL DESIGN / *AUFBAU*



1 - Drive block with pulley / *Antriebskopf mit Riemenscheibe*
2 - AT polyurethane tooth belt with steel tension cords/ *AT Stahlverstärkter zahnriemen aus Polyurethan*
3 - Carriage / Tischteil
4 - Linear Ball Guideway / *Kugelschienenführung*
5 - Aluminium profile-Hard anodized / *Aluminiumprofil-Harteloxiert*
6 - End block / *Endkopf*
7 - Belt Tension system / *Reimenspann-system*

HOW TO ORDER / BESTELLBEISPIEL

MTJ ECO - 40 - 1000 - L - 1 - R

Series / *Baureihe*:

MTJ ECO

Size / Baugröse:

40

Nominal stroke including safety (mm) /
Nennhub inkl. Sicherheit (***mm***)

Carriage Version / *Version* Tischteil :

S : Short / Kurz

L : Long / Lang

Type of drive pulley / *Antriebsart* :

0 : Pulley with through hole / *Antrieb mit Hohlwelle*

1 : Pulley with journal / *Antrieb mit Zapfen*

2 : Pulley with journal on both sides / *Antrieb mit Zapfen beidseitig*

3 : Without drive unit / Ohne Antrieb

Drive journal position / *Antriebsposition* :

L : Journal on left side / *Zapfen links*

R : Journal on right side / *Zapfen rechts*

Without / *Ohne*: For type of drive pulley 0, 2 and 3 / Für die Antriebsart 0, 2 and 3

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TECHNICAL DATA / *TECHNISCHE DATEN*

General technical data for MTJ ECO series / Allgemeine technische Daten für MTJ ECO

Linear Unit *Lineareinheit*	Carriage length *Tischteillänge* Lv [mm]	Load capacity *Tragzahl* Dynamic C [N]	Load capacity *Tragzahl* Static C0 [N]	Dynamic moment *Dynamisches Moment* Mx [Nm]	Dynamic moment *Dynamisches Moment* My [Nm]	Dynamic moment *Dynamisches Moment* Mz [Nm]	Moved mass *Bewegte Masse* [kg]	Maximum Repeatability *Max.Wiederhol-genauigkeit* [mm]	Maximum length *Maximale Länge* Lmax [mm]	Planar moment of inertia *Flächenträgheits-moment* Iy [cm⁴]	Planar moment of inertia *Flächenträgheits-moment* Iz [cm⁴]
MTJ 40 ECO	132	9329	19629	64	55	55	0,45	0,1	5960	9,53	9,21
	200	18658	39258	128	251	251	0,72	0,1			

*For lengths over the stated value in the table above please contact us.
위에 기술된 최대길이보다 길면 연락바랍니다.

Recommended values of loads / Empfohlene Belastungenswerte

All the data of static and dynamic moments and load capacities stated in the upper table are theoretical without considering any safety factor. We recommend a minimum safety factor (fv = 2.0)

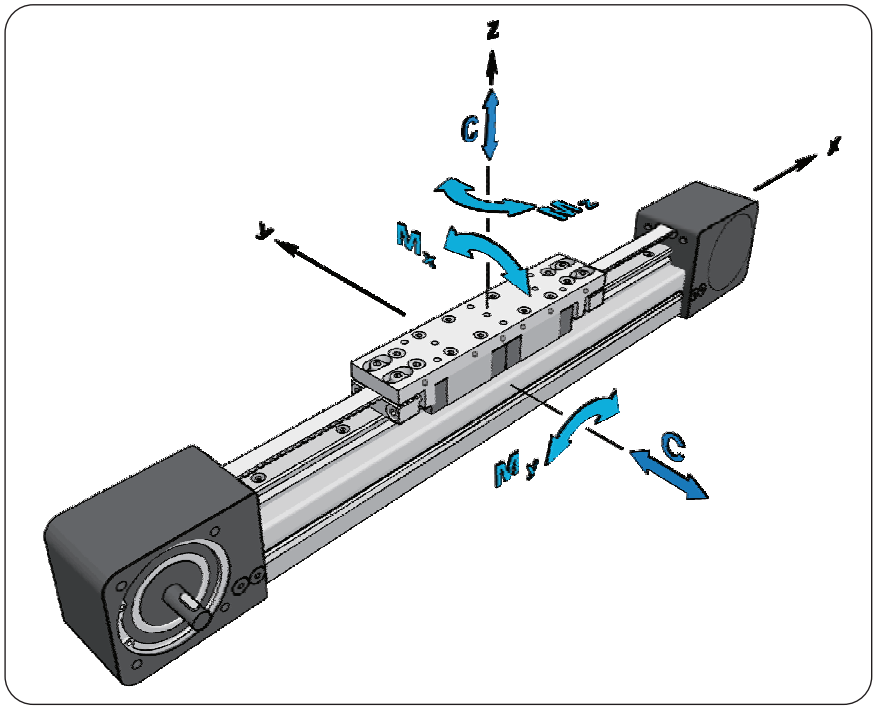
위 테이블에 기술된 모든 데이터는 안전계수가 고려되지 않은 이론치입니다.

적용검토시 최소안전계수를 적용바랍니다.

추천안전계수(*fv = 2.0).*

Modulus of elasticity / *Elastizitätsmodul*

E = 70000 N / mm$_2$



Drive and belt data / *Zahnriemen-und Antriebsdaten*

Linear Unit Linear-einheit	Maximal travel speed *Maximale Geschwindikeit* [m / s]	Maximum drive torque *Maximal Antriebsmoment* [Nm]	No load torque *Leelaufmoment* [Nm]	Puley drive ratio *Hub pro Umdrehung* [mm / rev]	Pulley diameter Durchmesser der Riemenschei [mm]	Belt type *Riementyp*	Belt width *Riemen-breite* [mm]	Max. force transmited by belt *Maximale Riemen-betriebskraft* [N]	Limit of belt elasticity *Elastizitäts-grenze* [N]	Specific spring constant *Spezifische Federrate* $C_{spec.}$ [N]
MTJ 40 ECO S	3	13,4	0,175	180	57,31	AT5	12	470	940	235 000
MTJ 40 ECO L			0,3							

Mass and mass moment of inertia / *Gewicht und Massenmoment der Trägheit*

Linear Unit Lineareinheit	Carriage length Tischteillänge Lv [mm]	Mass of linear unit *Gewicht der Lineareinheit* [kg]	Mass moment of inertia *Massenmoment der Trägheit* [10^{-5} kg·m^2]
MTJ 40 ECO	132	3,4 + 0,003·L [mm]	70,1 + 0,007·L [mm]
	200	3,9 + 0,003·L [mm]	92,3 + 0,007·L [mm]

Mass calculation doesn´t include mass of motor, reduction gear, switches and clamps.
위 무게계산에서 모타,감속기,스위치 그리고 클램프등은 포함되어 있지 않습니다.

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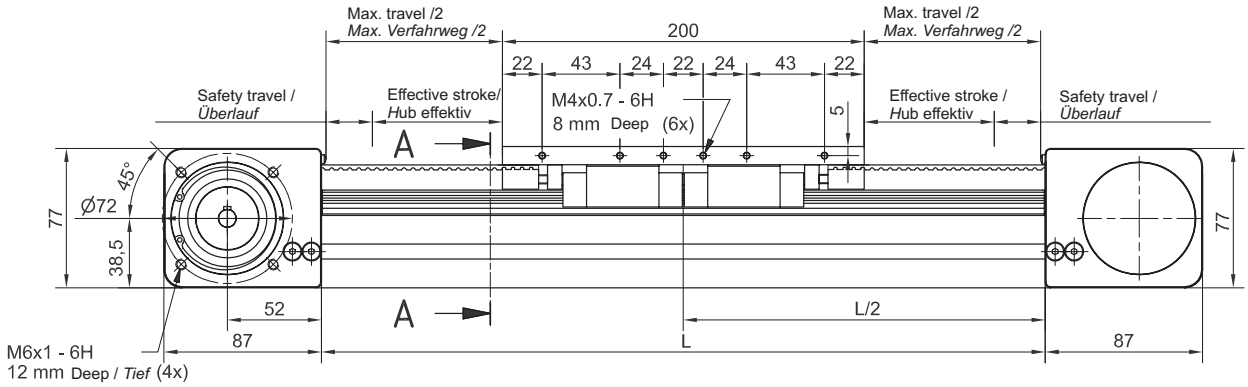
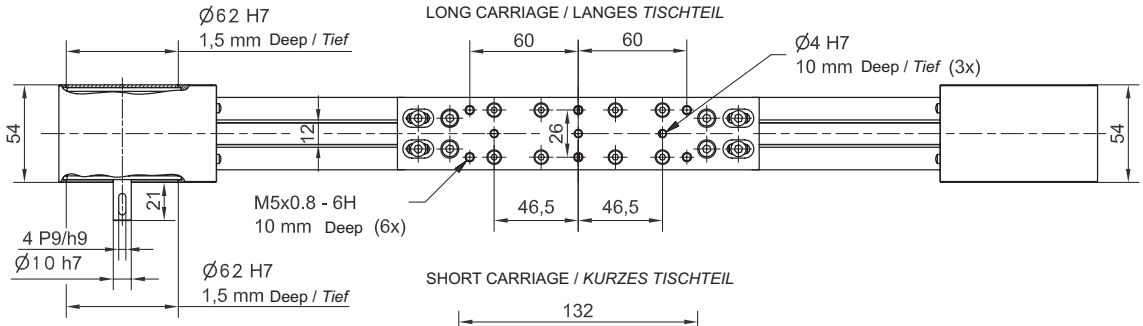
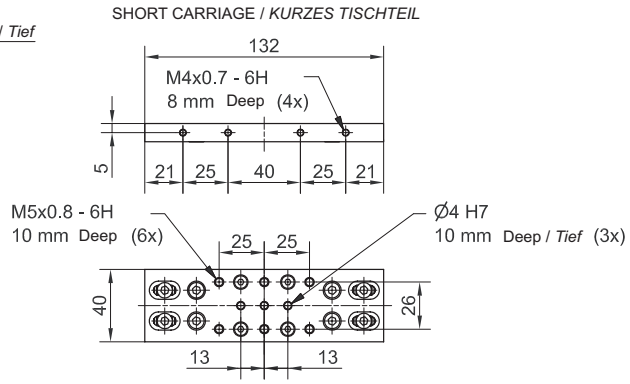
DIMENSIONS / *ABMESSUNGEN*



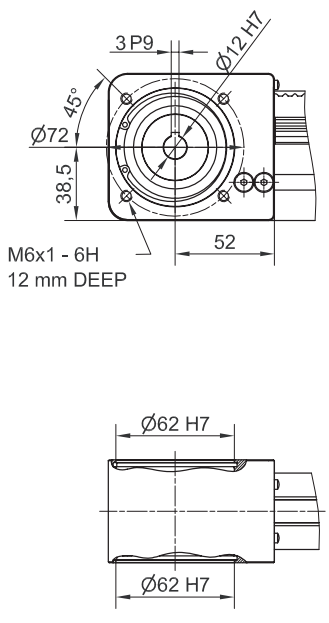




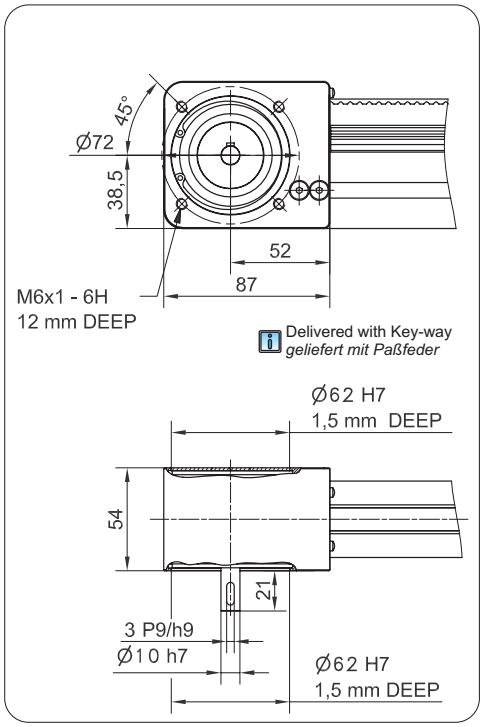
All dimensions are in mm.
Drawings scales are not equal.

Alle Maße sind in mm.
Darstellungen in unterschiedlichen Maßstäben

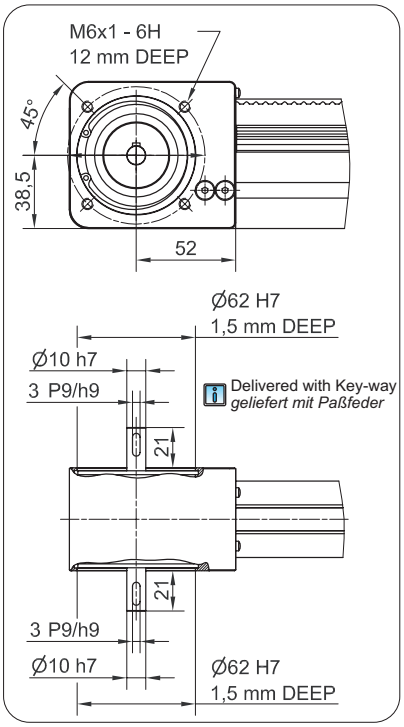
TYPE / TYP 0



TYPE / TYP 1 L and 1 R



TYPE / TYP 2



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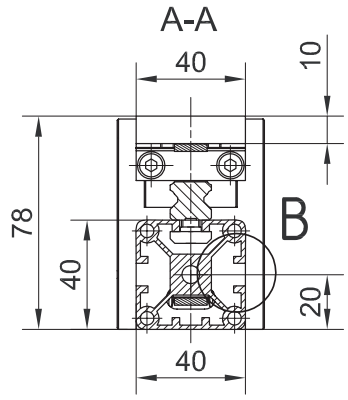
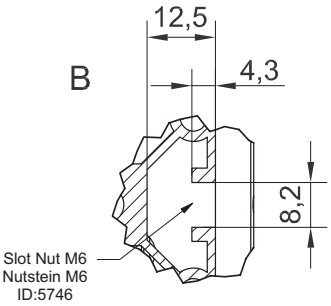
TECHNICAL DATA / *TECHNISCHE DATEN*





All dimensions are in mm. Drawings scales are not equal.

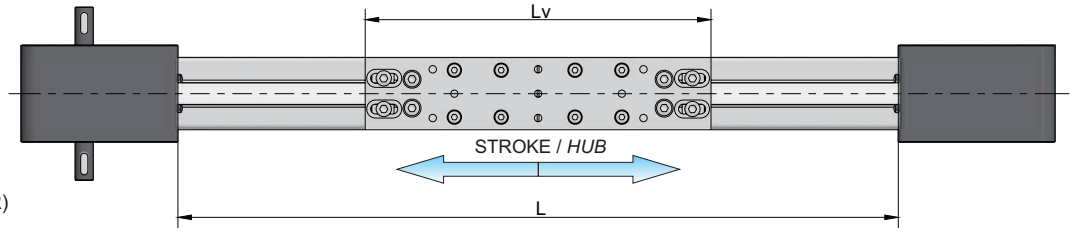
Alle Maße sind in mm. Darstellungen in unterschiedlichen

Defining of the linear module length / *Festlegung der Länge der Lineareinheit*

L = Effective stroke + 2 × Safety travel+ Lv + 15 mm

L = Hub effektiv + 2 × Überlauf + Lv + 15 mm

Left side / *Links* (L)



Right side / *Rechts* (R)

MOTOR	MTJ 40 ECO	GEAR REDUCER + MOTOR	MTJ 40 ECO	GEAR REDUCER 90° + MOTOR	MTJ 40 ECO
	Available on request *Verfügbarkeit (Lieferzeit) auf Anfrage*		Available on request *Verfügbarkeit (Lieferzeit) auf Anfrage*		Available on request *Verfügbarkeit (Lieferzeit) auf Anfrage*