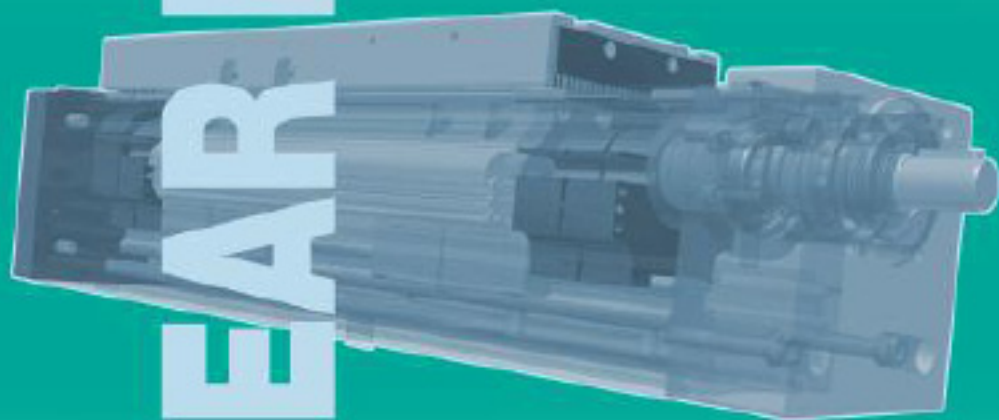


LINEAR MOTION

**SNR linear modules:
Welcome to the new
generation!**



Industry





SNR – An antifriction bearing manufacturer with international standing



For almost a century now, SNR has concentrated its activities on the development, design and manufacture of antifriction bearings for markets and applications in which these products take on a central function.

With its sales network, SNR is currently represented in more than 200 countries on five continents.

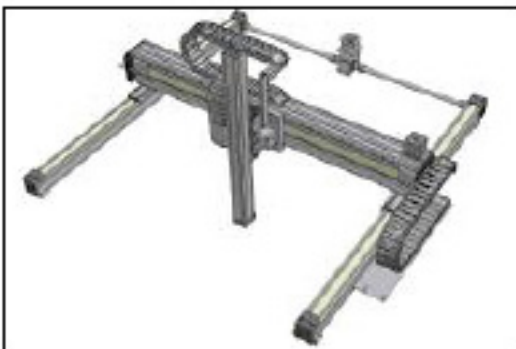
We would like to share with you the expertise we have gained as the third-largest manufacturer of antifriction bearings in Europe with production

sites around the globe.

SNR has been ISO 9001 certified since 1990. This was followed by AGF and QS 9000 certification. Our ISO 14001 certification and ISO 9001-2000 for design and sales complete our quality assurance policy.

SNR linear modules are produced at our new plant in Bielefeld. With a tightly knit network of sales engineers and sales partners throughout the world, we can offer you intensive, skilled support and consultancy at any time and anywhere.

SNR – An expert partner



We have been successfully working for you in linear technology since 1985. Thanks to innovation and new ideas, we have been able to consistently expand our position in the market.

We can offer an optimal solution for almost all industrial applications where linear motion is required.

Forward-looking products and the highest possible quality standards are the characteristics of SNR linear technology.

As a result of consistent development, our product range is currently one of the most competitive in the linear axis sector, and features our complete range of drive and control technology.

[Ask for us!](#)

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Product description

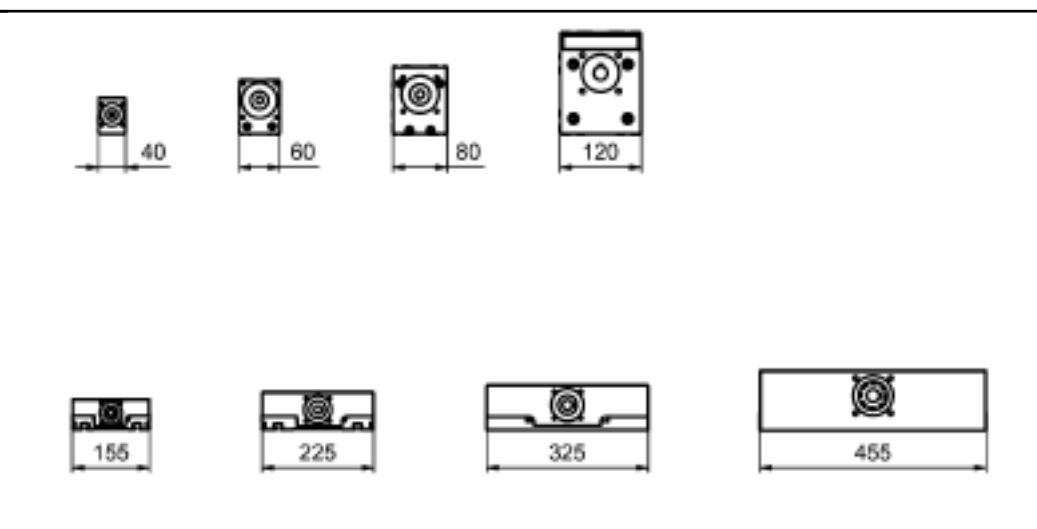


AXC/AXLT product overview

	AXC40-Z	AXC40-S	AXC60-Z	AXC60-A	AXC60-S	AXC80-Z	
Cross section [mm]	40x40	40x40	60x60	60x60	60x60	80x80	
Drive element	Toothed belt	Ball screw	Toothed belt	Toothed belt	Ball screw	Toothed belt	
Lead [mm] or feed constant [mm/rev.]	75	5 / 10	150	150	5/10/16	200	
Max. dyn. operating load [N]	210	1000	560	560	3600	870	
Repeat accuracy [mm]	0,05	0,03	0,05	0,05	0,03	0,05	
Speed [m/s]	10	1	10	10	1,6	10	
THK linear motion guide		•	•	•	•	•	
Roller guide system	•		•	•	•	•	
Max. overall length [m]	6	3,5	8	8	3,5	8	
Max. loads and load torques (dyn.)	PR [N]	200	660	2750	2750	2750	4300
	PL [N]	200	660	2750	2750	2750	4300
	PT [N]	330	660	2750	2750	2750	4300
	MA [Nm]	4,5	18	95	95	200	260
	MB [Nm]	7,4	18	95	95	200	260
	MC [Nm]	2,8	4,5	19	19	24	43



	AXC80-A	AXC80-S	AXC120-Z	AXC120-A	AXC120-S	AXLT155	AXLT225	AXLT325	AXLT455
	80x80	80x80	120x120	120x120	120x120	155x60	225x75	325x90	455x120
	Toothed belt	Ball screw	Toothed belt	Toothed belt	Ball screw	Ball screw	Ball screw	Ball screw	Ball screw
	200	5/20/50	320	320	5/10/20/32	5 / 20	5/10/ 25	5/10/20/32	5/10/20/40
	870	5200	2500	2500	9500	5200	4700	9500	16300
	0,05	0,03	0,05	0,05	0,03	0,03	0,03	0,03	0,03
	10	2	10	6	2	2	2	2	2
	•	•	•	•	•	•	•	•	•
	•		•		•				
	8	3,5	10	10	5,5	3,5	3,5	3,2	3,2
	4300	2000	8700	8700	11000	6900	10900	22000	30000
	4300	2000	8700	8700	11000	6900	10900	22000	30000
	4300	2000	8700	8700	11000	6900	10900	22000	30000
	260	120	730	790	950	420	930	2700	3700
	260	120	730	790	950	420	930	2700	3700
	43	34	120	120	150	340	810	2250	3950



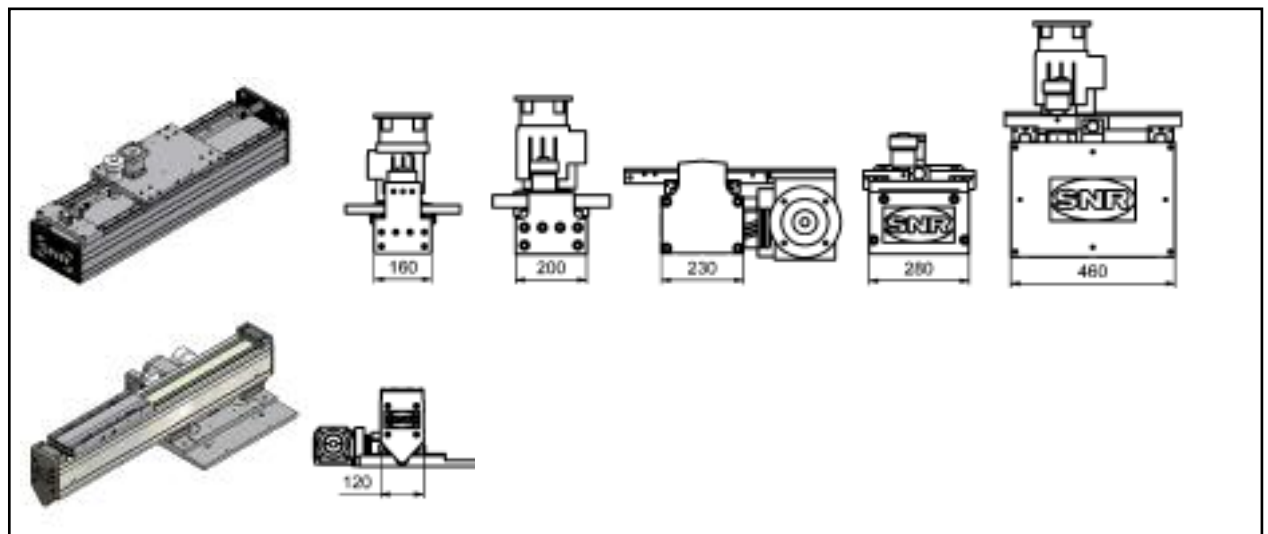
Product description



AXS product overview

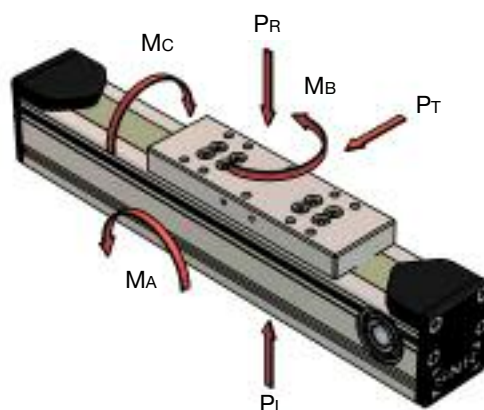
	AXS120T	AXS160-M	AXS200-M	AXS230-M	AXS280-Z	AXS280-M	AXS460-M
Cross section [mm]	120x120	160x80	200x100	230x160	280x170	280x170	460x320
Drive element	rack	rack	rack	rack	rack	rack	rack
Lead (mm) or feed constant [mm/rev.]	500 280	160	250 200	320	480	200	250
Max. dyn. operating load [N]	2500	2860	6130	10750	4000	3190	5860
Repeat accuracy [mm]	0,1	0,05	0,05	0,05	0,05	0,05	0,05
Speed [m/s]	10	3	3,4	2,5	6	3,3	6
THK linear motion guide	•	•	•	•	•	•	•
Max. overall length [m]	3	6	6	10	10	10 *	10 *
Max. loads and load torques (dyn.)	PR [N]	12200	7300	21000	14700	24000	28000
	PL [N]	12200	6800	21000	14700	24000	28000
	PT [N]	12200	6100	21000	17400	24000	28000
	MA [Nm]	1750	690	2250	1850	2950	4300
	MB [Nm]	1750	580	2250	1850	2950	4300
	MC [Nm]	470	380	1450	1200	2600	3000

* Greater lengths with butt-jointed aluminium profiles available on request.



Dynamic load ratings of the linear motion systems

Axis	Rail	PR [kN]	PL [kN]	PT [kN]	MA [kNm]	MB [kNm]	MC [kNm]
AXC40-S	S9	5,38	5,38	6,40	0,151	0,179	0,021
AXC40-Z	LR17	1,65	1,65	2,68	0,037	0,060	0,023
AXC60-S	S15	18,20	9,10	9,65	0,455	0,482	0,112
	H15	28,40	28,40	28,40	1,789	1,789	0,320
	LR24	4,43	4,43	6,83	0,215	0,331	0,084
AXC60-Z	S15	29,40	14,70	15,58	0,544	0,577	0,192
	H15	28,40	28,40	28,40	1,051	1,051	0,320
	LR24	4,43	4,43	6,83	0,215	0,331	0,084
AXC80-S	W21	16,48	16,48	16,48	1,063	1,063	0,458
AXC80-Z	S20	39,20	19,60	20,78	1,264	1,340	0,360
	H20	44,60	44,60	44,60	2,877	2,877	0,722
	W21	16,48	16,48	16,48	0,898	0,898	0,458
	LR47	16,11	16,11	24,17	0,806	1,208	0,443
AXC120-S	R20	39,60	39,60	39,60	3,742	3,742	1,109
	S30	93,00	46,50	49,29	4,511	4,781	1,142
	H30	89,60	89,60	89,60	8,691	8,691	1,730
	LR47	16,11	16,11	24,17	1,821	2,731	0,537
AXC120-Z	S30	93,00	46,50	49,29	4,580	4,855	1,142
	H30	89,60	89,60	89,60	8,243	8,243	1,730
	W35	71,00	71,00	71,00	6,568	6,568	3,260
	LR47	24,17	24,17	36,25	1,821	2,731	0,806
AXLT155	H15	56,80	56,80	56,80	2,431	2,431	2,982
AXLT225	H20	89,20	89,20	89,20	6,289	6,289	7,136
AXLT325	H30	179,20	179,20	179,20	18,278	18,278	20,608
AXLT455	H35	249,20	249,20	249,20	34,888	34,888	37,380
AXS120T-E1	H25	126,80	126,80	126,80	20,922	20,922	5,072
AXS120T-E2	W35	71,00	71,00	71,00	6,568	6,568	3,260
AXS160-M	G30	75,20	69,94	66,55	7,308	6,955	4,196
AXS200-M	H30	216,80	216,80	216,80	26,450	26,450	16,260
AXS230-M	H30	179,20	179,20	179,20	21,683	21,683	13,440
AXS280-M	H35	291,60	291,60	291,60	53,071	53,071	35,284
AXS280-Z	H35	249,20	249,20	249,20	34,639	34,639	30,153
AXS460-M	H45	331,20	331,20	331,20	86,278	86,278	62,928



Product description



Compact modules

Our compact AXC line of linear axes can be used universally as a single axis or in complex multi-axis systems, in combination with other axes from this line or linear axes from our system range (AXS).

Integrated coupling

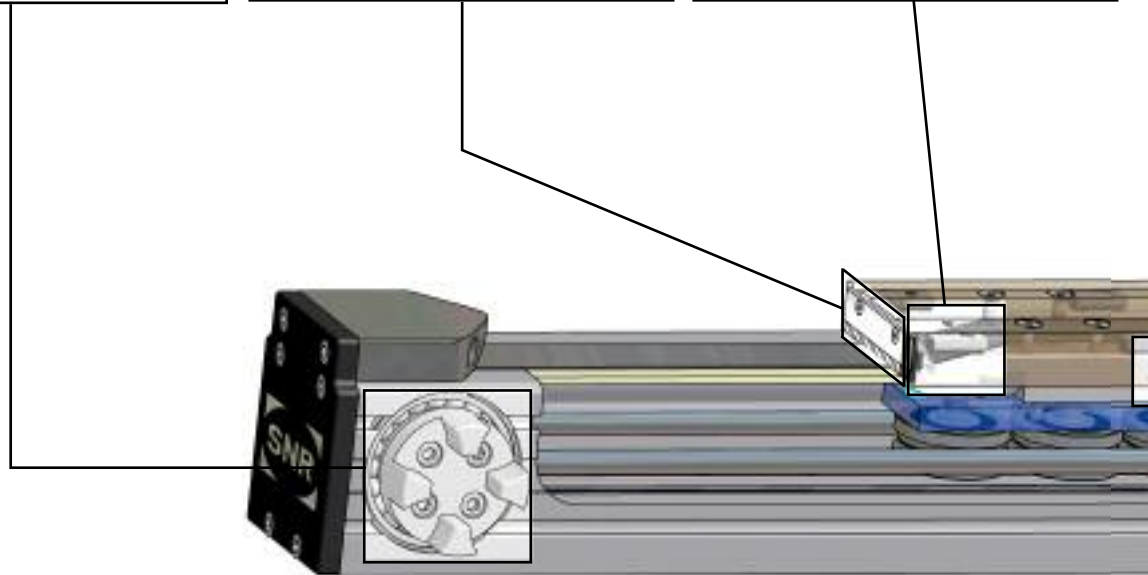
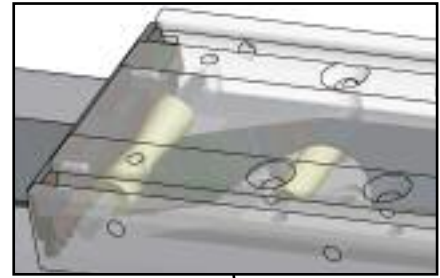
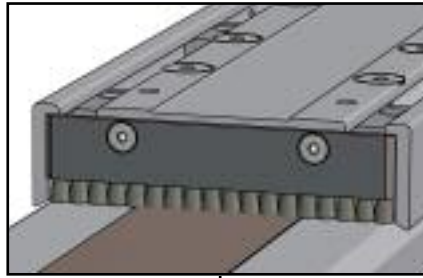
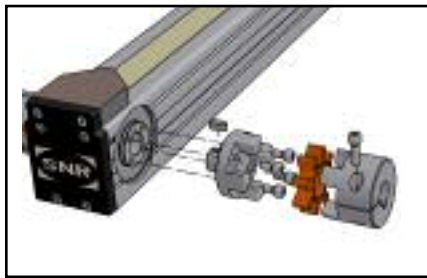
A belt pulley bolted to the coupling achieves a torque transmission actuated with adherence which, compared with conventional feather key connections, guarantees a durable connection free from backlash and wear even with high dynamic performance.

Scraper brushes

The scraper brushes reliably remove coarser dirt from the covering strip and aluminium profile.

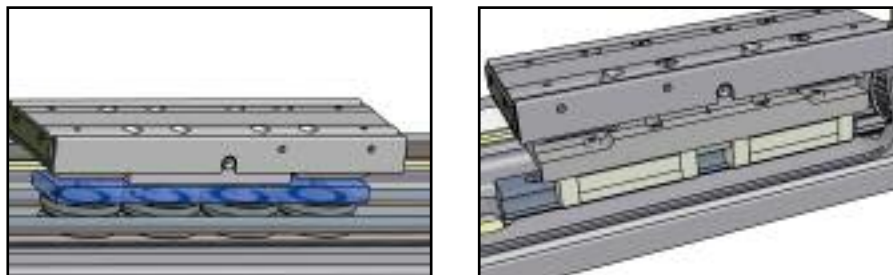
Covering strip

A tried and tested covering strip protects the internal guide and drive systems against soiling. The covering strip's roller guide system ensures extremely low-friction operation. The special geometry also ensures an optimal seat for the covering strip, even with overhead installation.



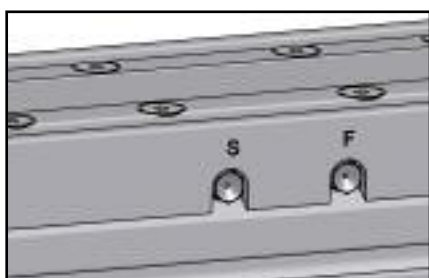
Variable linear motion system

The variable use of a roller guide or THK linear motion guide facilitates optimal adjustment to the application.



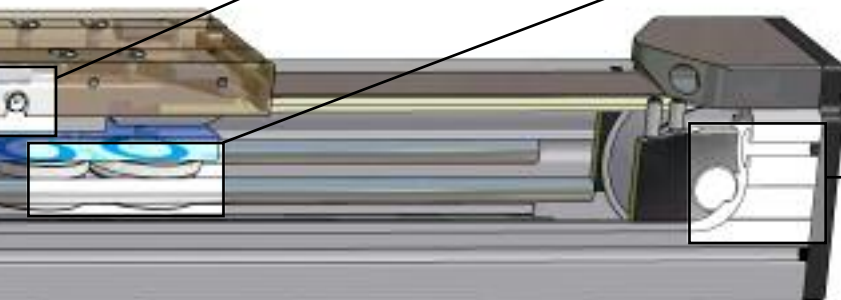
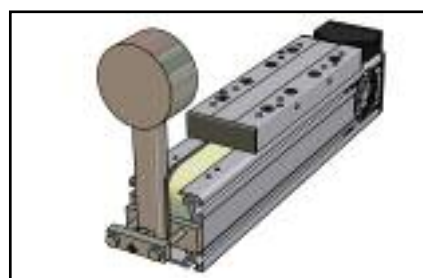
Convenient relubrication

All AXC linear axes with ball screw or THK linear motion guide are equipped with lubricating nipples on both sides in order to guarantee optimum accessibility. Screw-type drive and linear motion guide can be relubricated separately in order to guarantee optimal supply of lubrication.



Toothed belt tension

A radially movable bearing on the deflection pulley guarantees the 100% adjustability and repeatability of the belt tension specified in the design. This technology makes it possible for the belt to be retensioned during service without disassembling the load.



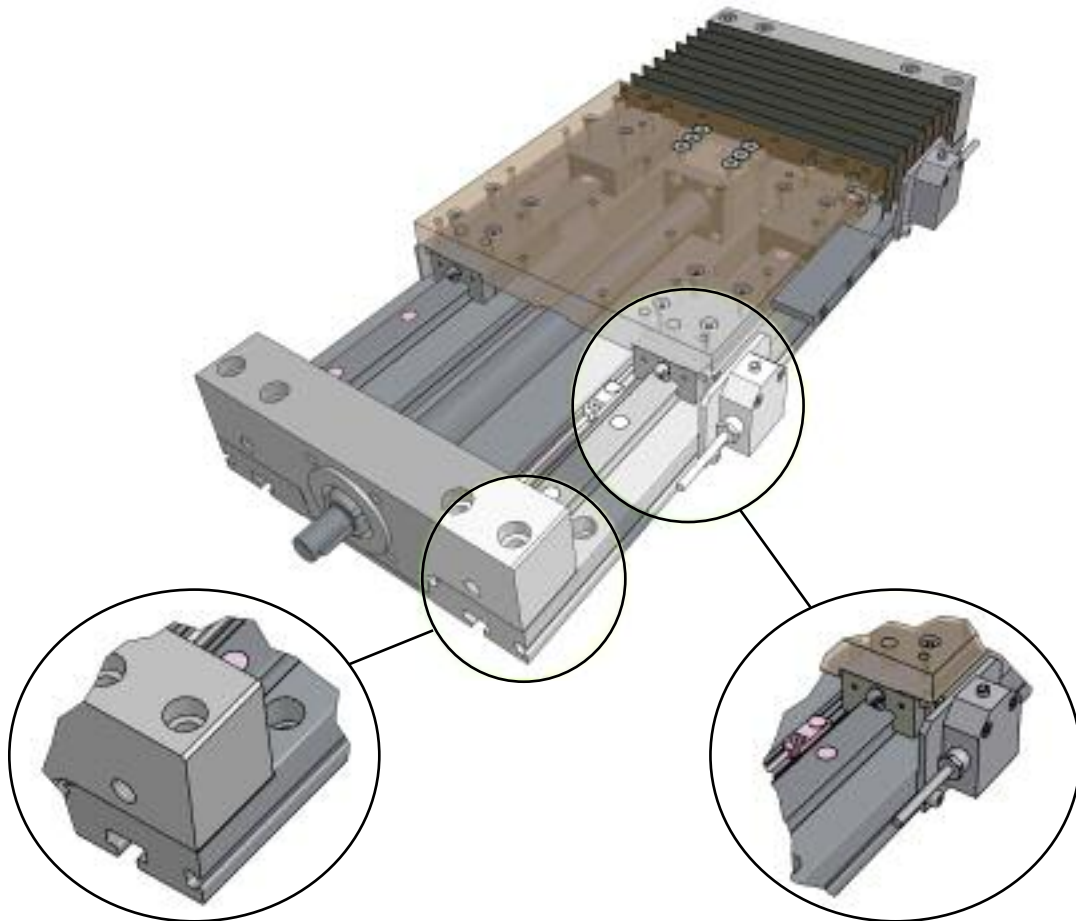
Product description



Linear tables

For applications with high loads, particularly torque loads, our AXLT line of linear tables offer outstanding solutions. In order to be able to optimally utilise the potential of the linear motion and drive systems, all sizes are also available with a steel base plate.

The integrated ball screw guarantees accurate sequences of movements even at the highest loads. Two parallel THK linear motion guides ensure that high load torques can be taken up. All internal components such as the screw-type drive, linear motion system and switch are protected against external influences by a bellows available as standard.



Fixing

Depending on installation position and size, the structure of their base plates mean that our linear tables can be screwed tight from below with the sliding block, or from above.

Limit stop

A choice of an internal inductive proximity switch or an externally mounted mechanical limit switch is available as a limit stop.

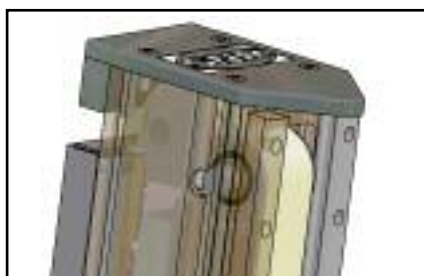
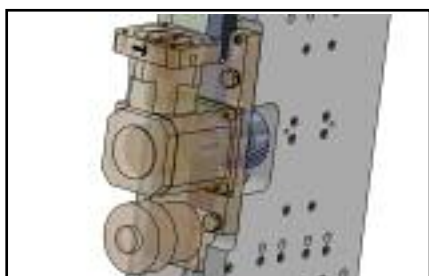
Telescopic axes

SNR telescopic axes are characterised by optimal coordination of the linear motion systems with the drive combination of toothed belt and rack. They are particularly suitable for use in tight spaces. Our modules are equally suitable for vertical and horizontal usage and can realise speeds up to 10 m/s.

The telescopic axes can be supplied in combination with our gantry axes as a complete system, or integrated into existing systems or new concepts as an individual module.

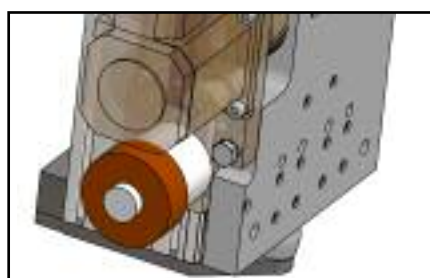
Drive

Telescopic function with combined drive from rack and toothed belt.



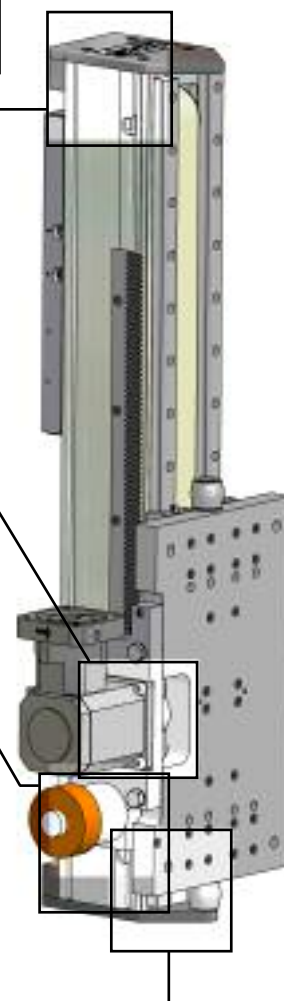
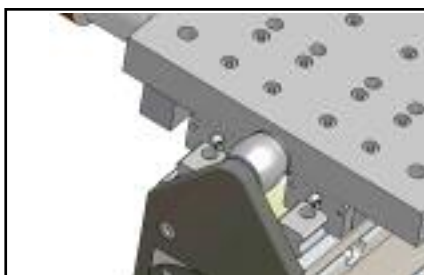
Lubrication

Using a permanent lubrication system combined with a felt toothed wheel guarantees the optimal supply of lubrication to the rack drive.



Shock absorbers

Structural shock absorbers are used as standard for mechanical end position limiting.



Product description



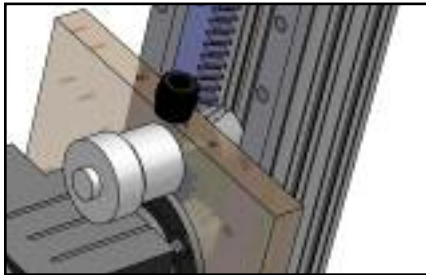
Lifting axes with rack drive

SNR lifting axes are predominantly used for vertical handling on YZ and XYZ gantries due to the high operating forces that can be transferred by the rack drive. By means of a variable profile design and the stiff design of the THK linear motion guides arranged in parallel, here loads of up to 1,000 kg can be moved without problems.

Due to the flexible basic design, these linear modules are also ideal for use in horizontal applications with long strokes. By means of appropriate butt joints, the basic components such as aluminium profile, guide rail and rack can be extended almost without limits. This variant also enables several sled units to be moved independently on one axis.

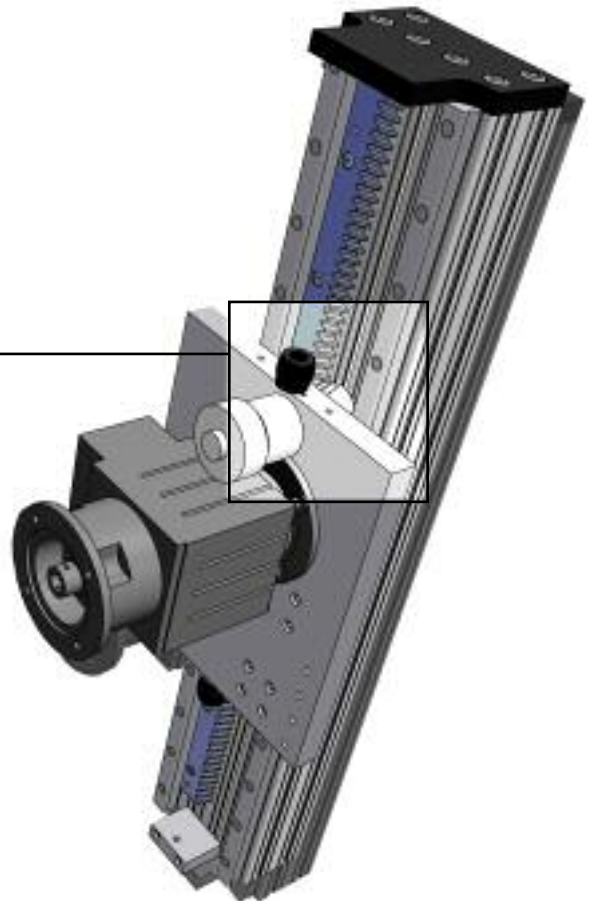
Lubrication

An optimal supply of lubrication to the rack drive is guaranteed by using a permanent lubrication system in combination with a felt toothed wheel.



Shock absorbers

Structural shock absorbers are used in vertical installation positions for mechanical end position limiting. These are dimensioned in accordance with the maximum loads of the relevant size.



Gantry axes

The gantry axes can carry high loads and are available as cantilever lengths up to 10 m. For highly dynamic applications, these models are available with toothed belt drive. As THK guides with caged ball technology are also used in these linear axes, they feature particularly quiet running even at high speeds.

For applications where the focal point is large stroke lengths and the stiffness of the drive components, our rack-driven linear axes offer a wide range of options, as all basic components such as aluminium profiles, guide rails and racks can be extended almost indefinitely as a butt-joint version. This variant also enables several sled units to be moved independently on one axis.

Shock absorbers

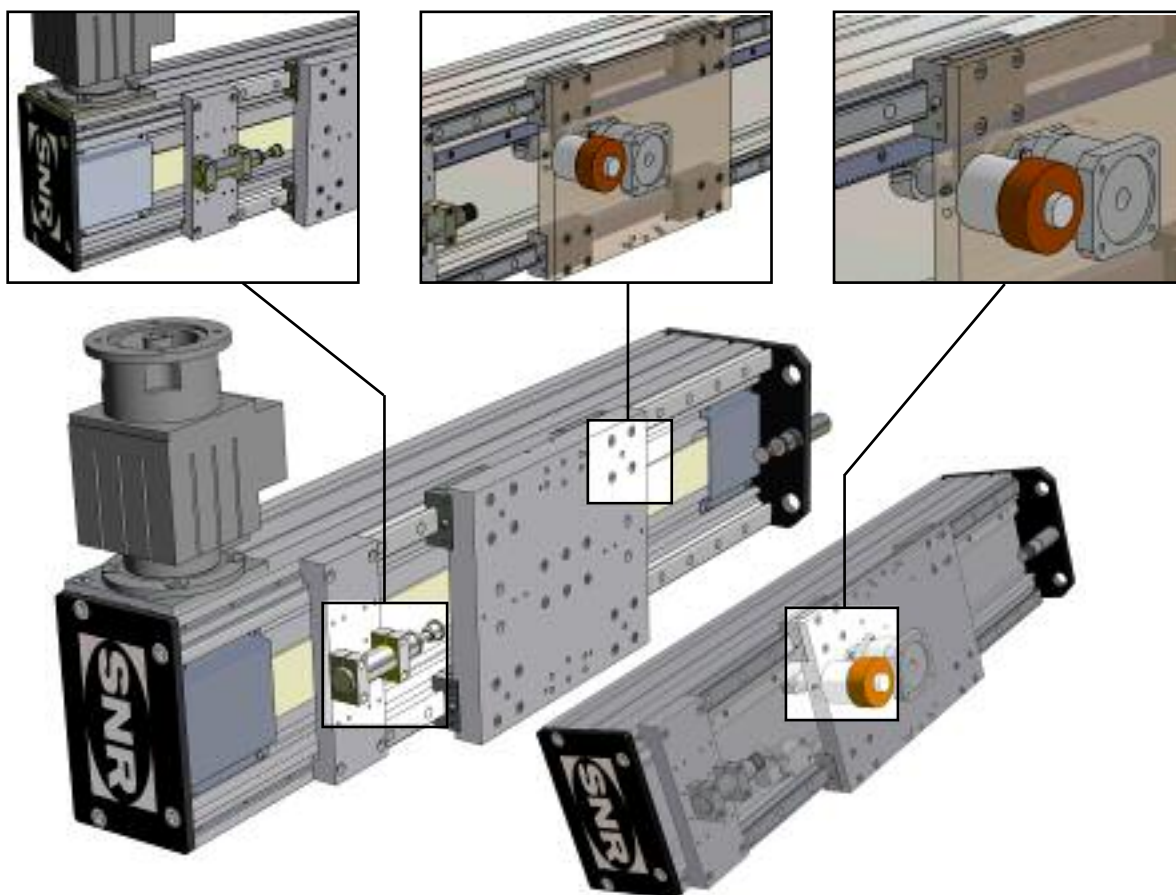
Exclusively hydraulic end stop shock absorbers are used for mechanical limit stops with the SNR gantry axes.

Linear motion system

Highest loads and smooth running performance due to THK linear motion guides configured in parallel.

Lubrication

An optimal supply of lubrication to the rack drive is guaranteed by using a permanent lubrication system in combination with a felt toothed wheel.



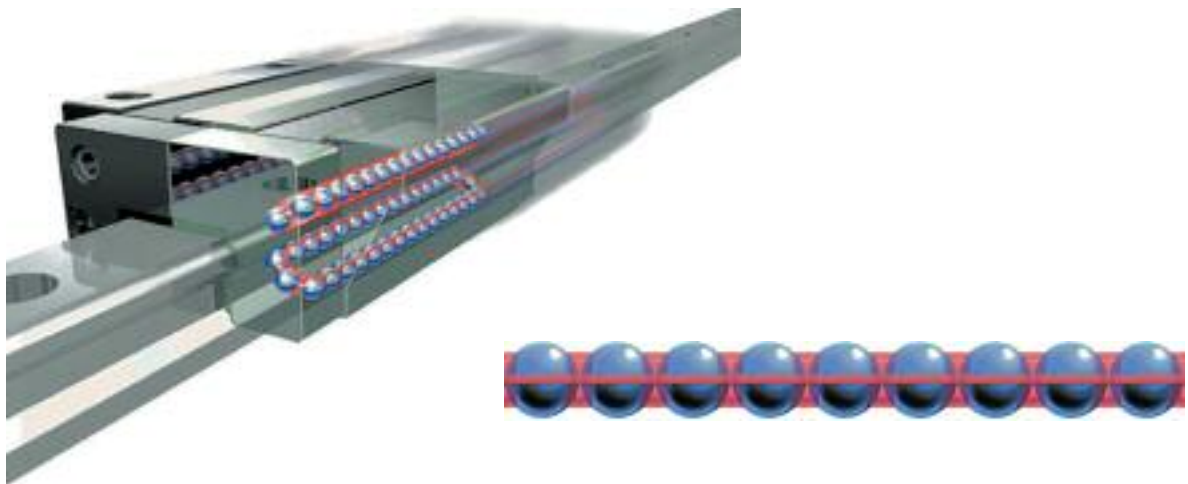


The linear motion systems

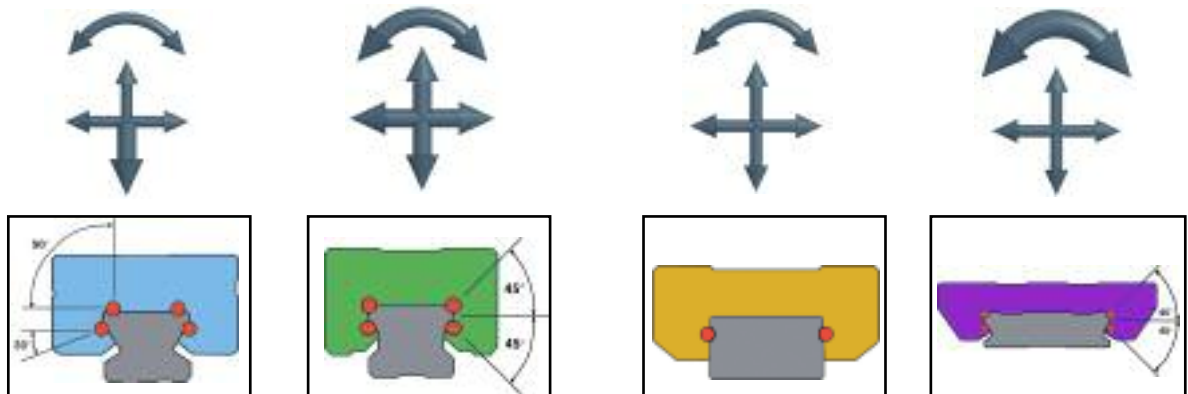
THK linear motion guide

THK linear motion guides with caged ball technology are available for all sizes of our linear modules.

The caged ball technology allows the guide system to operate smoothly and quietly. This results in minimal noise emissions, top speeds of up to 8 m/s and freedom from long-term maintenance.



Depending on the size, a various versions of the linear motion guides are available, so that the best rail guide for the application can be selected. This ensures that the best possible guide accuracy is guaranteed even at high loads.



Guide type S

Ideal for radial loads

Guide type H

Universal application due to identical load ratings in all main load directions

Guide type S (for AXC40)

Miniature guide system. Therefore ideal for use in small linear axes

Guide type W

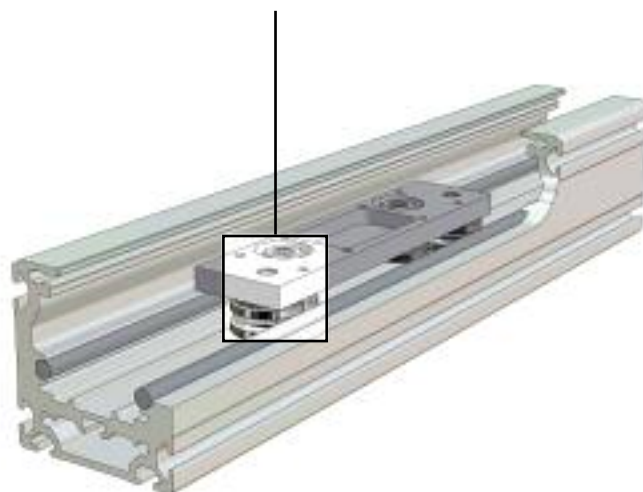
Highest torque load due to wide rail geometry

Roller guide system

Alternatively, all sizes in the AXC line are available with a roller guide system. This system consists of four roller guides, which roll along hardened steel ground shafts built into the aluminium profile.



As a result of the eccentric bearing arrangement of the two roller guides, the guide system can be precisely adjusted and thus given the correct preload or zero backlash at the factory. This technology ensures that the roller guide system also offers outstanding operating performance.



Load capacities

The dynamic load capacities of both linear motion systems are based on an average speed of 1.5 m/s (toothed belt drive) or 0.75 m/s (ball screw), with a nominal service life of 10,000 hours in continuous operation. For parameters deviating from these, and for complex load situations, please make use of our calculation service.

Product description



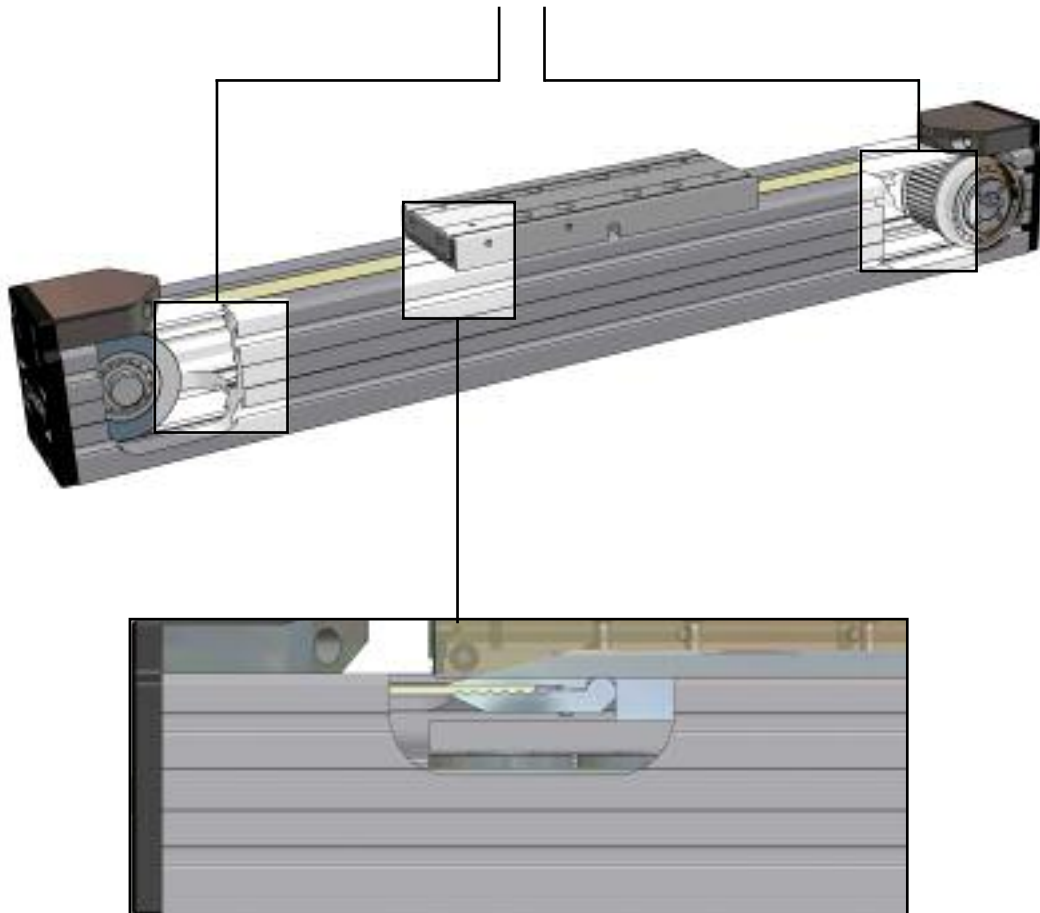
Drive systems

Toothed belt drive

The toothed belt drive is primarily used for fast handling and positioning tasks, as the crucial factor here is the speed. All sizes in the AXC line are equipped with AT design toothed belts.

Integrated belt pulleys

The integrated belt pulleys allow an optimal ratio between stroke and overall length as well as a continuous aluminium profile to be achieved. The benefits for the user are an extremely compact design and considerably greater flexibility in the fixing of the linear axis.



Toothed belt clamping

The ingenious design of the belt clamp enables the full width of the belt to be clamped with uniform strength so that the full load capacity of the toothed belt is guaranteed.

Omega design toothed belt drive

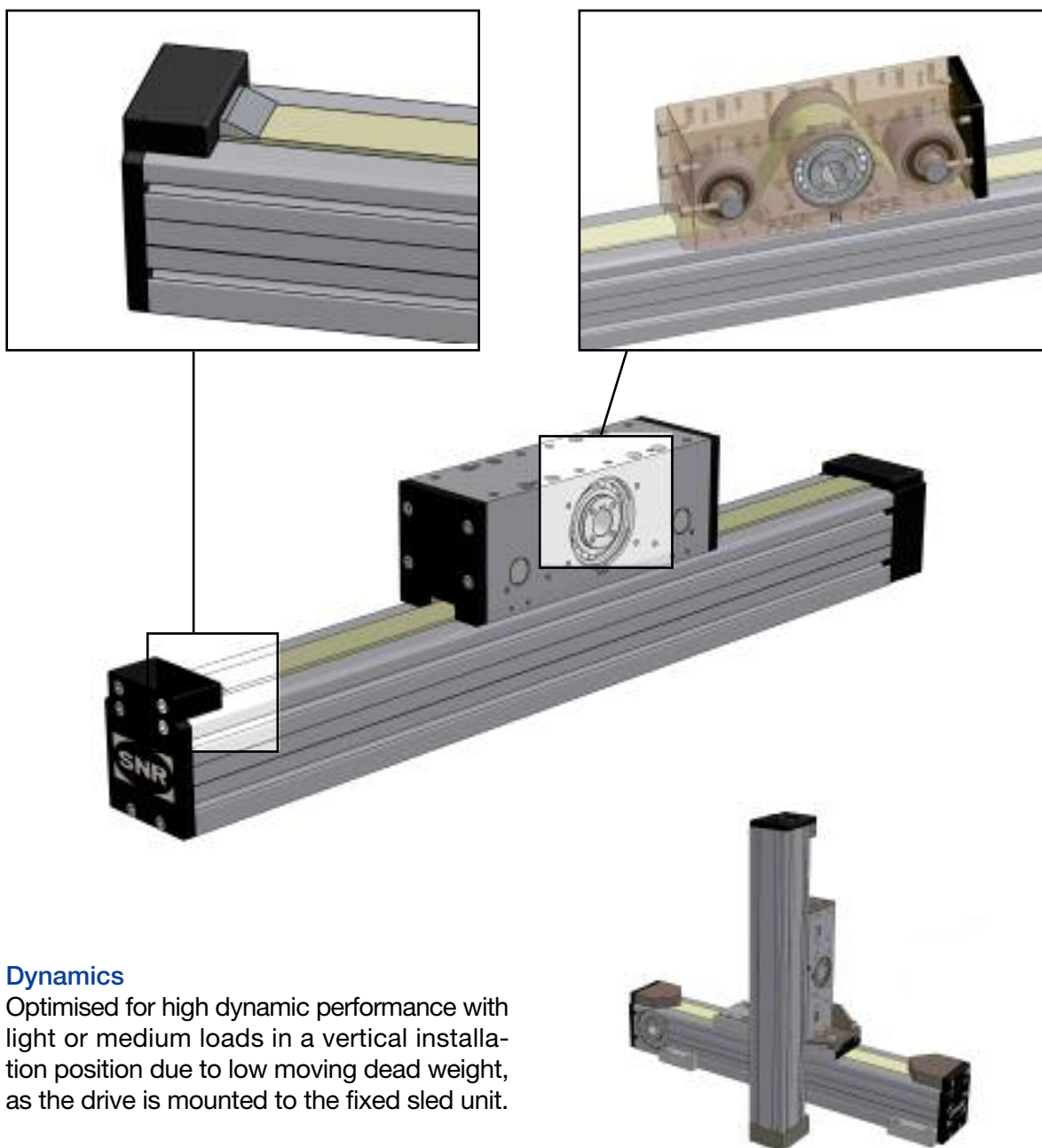
The Omega drive is a variant of the toothed belt drive.

Belt clamping

The toothed belt clamping is found at the ends of the linear axis. The complete width of the belt will also be used here for the clamping.

Drive

The drive components (belt pulley, deflection pulley) are integrated in the sled unit.



Dynamics

Optimised for high dynamic performance with light or medium loads in a vertical installation position due to low moving dead weight, as the drive is mounted to the fixed sled unit.

Product description



Drive systems

Screw-type drive

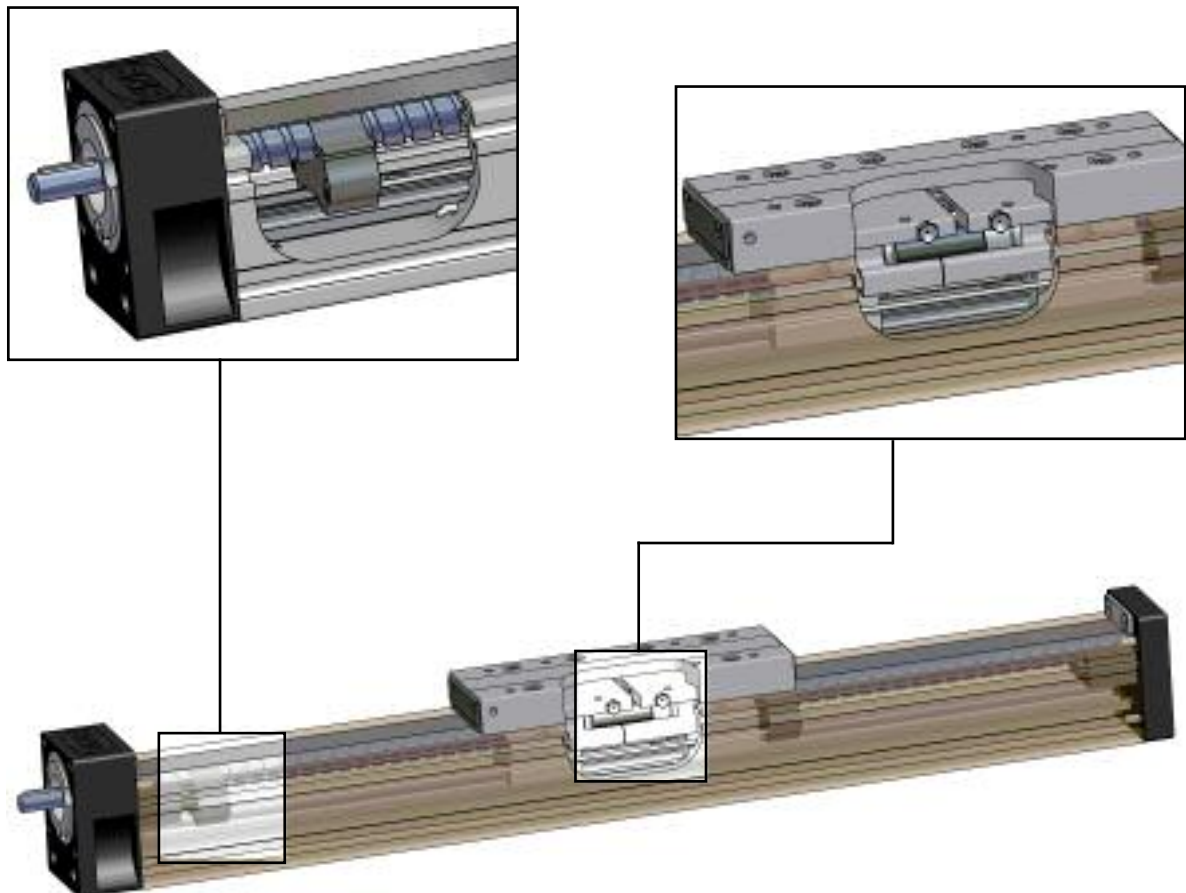
The screw-type drive, particularly the ball screw, is used where high positioning and repeat accuracy are required. For simple sequences of movements with low dynamics, trapezoidal screw threads with various leads are available.

Spindle support

At higher speeds, our screw-type drives are equipped with appropriate spindle supports to guarantee safe operation.

Accuracy / Quality

In the standard version, our AXC and AXLT linear modules are equipped with rolled ball screw spindles (lead accuracy: $2 \mu\text{m}/300 \text{ mm}$) and low backlash nuts. Spindles with greater lead accuracy and pre-tensioned nuts are available for more demanding positioning tasks.

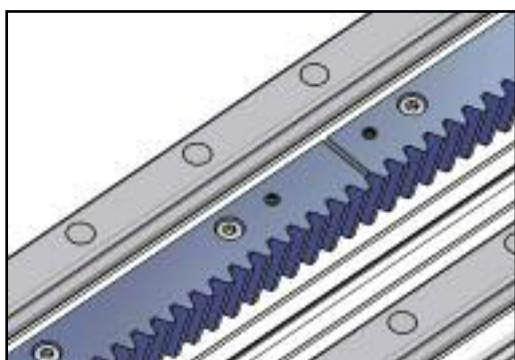


Rack drive

Rack drives are also available as an alternate drive system for the linear axes of the AXS line. Vertical applications in particular can be carried out extremely reliably with this drive system.

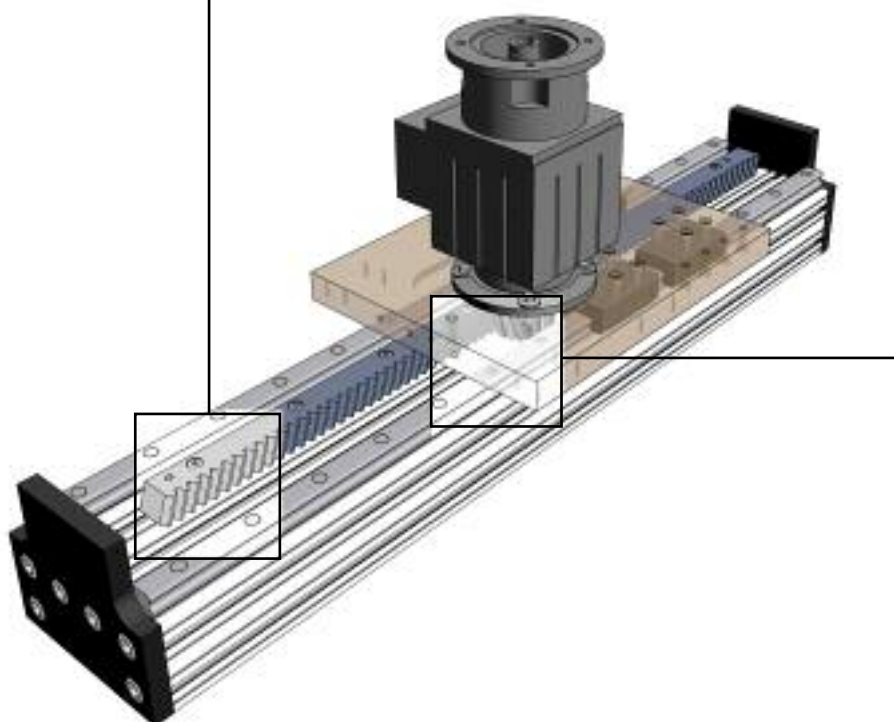
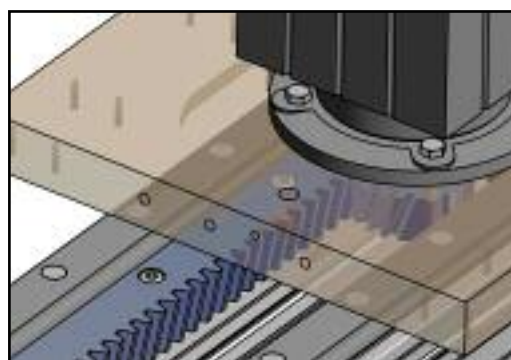
Butt joint

Butt joints are used to connect the rack segments together to produce theoretically unlimited stroke lengths. Exact split adjustment using assembly tool. Fixing the butt joint by pinning.



Rack / toothed wheel

Inductively tempered racks and the associated toothed wheels guarantee a long service life. The rack drive offers the maximum rigidity in the drive system, even with heavy loads.

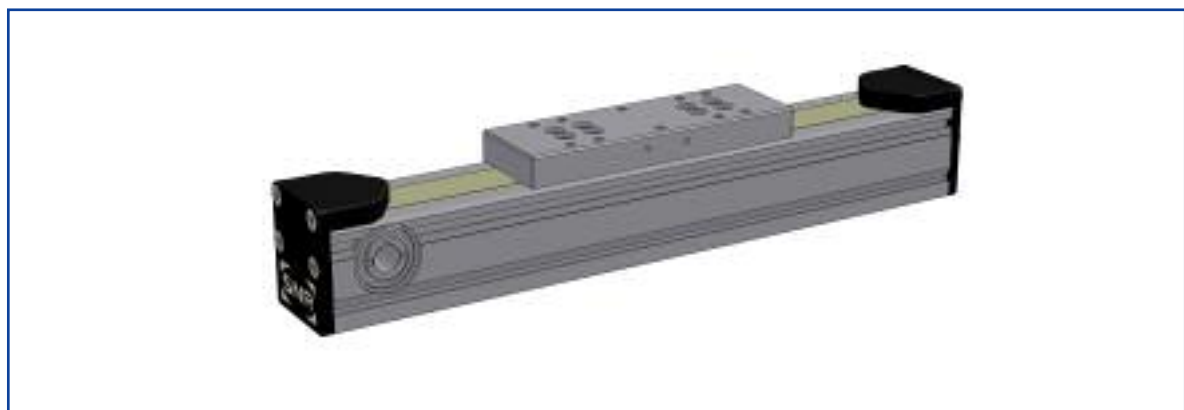
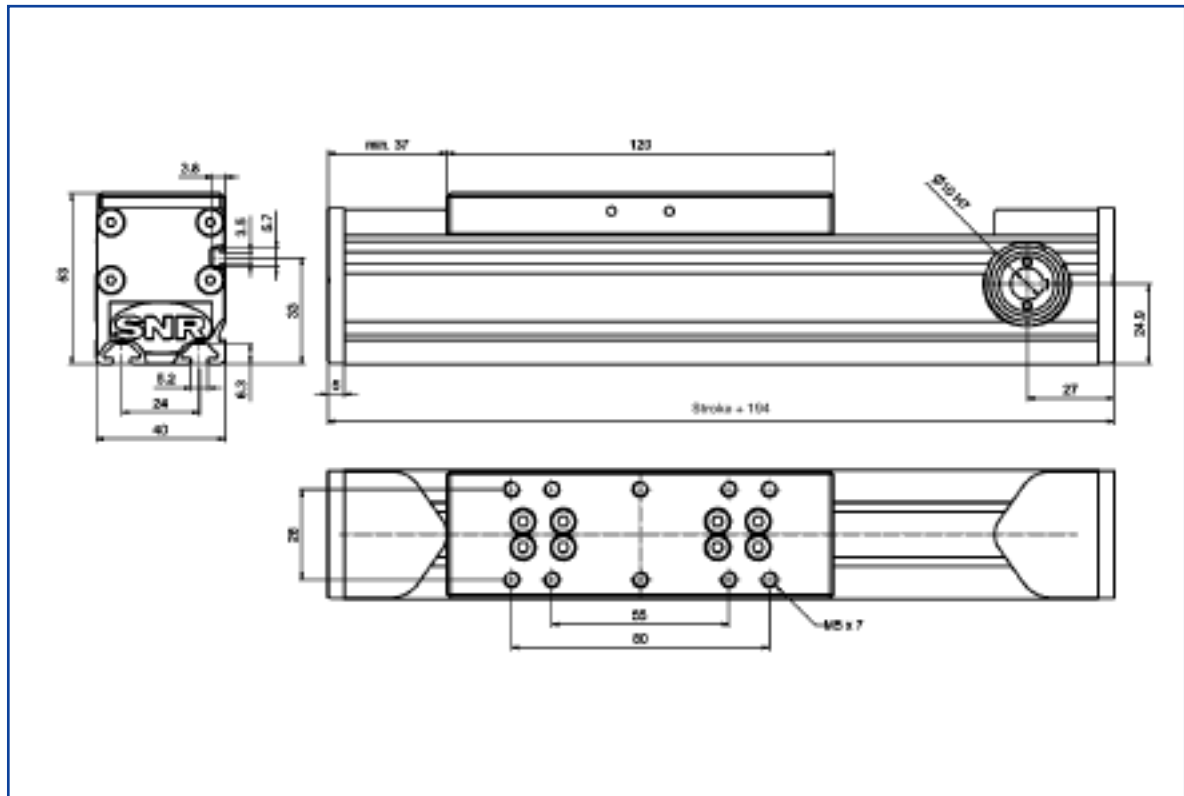


Compact modules



AXC 40-Z

Linear axis with toothed belt drive and roller guide



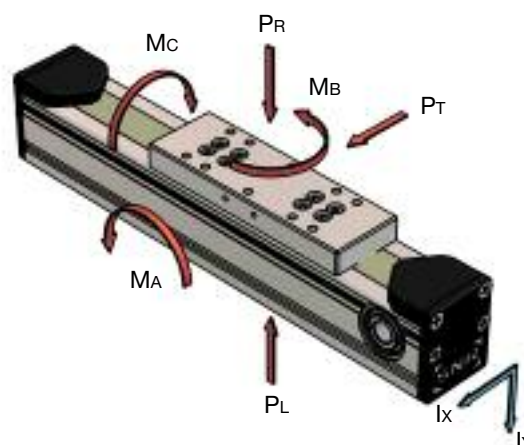
AXC 40-Z

Linear axis with toothed belt drive and roller guide

Loads and load torques*

Roller guide system LR17		
Loads [N]	dyn.	stat.
P_R	200	200
P_L	200	200
P_T	330	330
Load torques [Nm]		
M_A	4,5	4,5
M_B	7,4	7,4
M_C	2,8	2,8

* Max. permitted loads in accordance with definition on page 17.
See from page 9 onwards for load ratings for individual lifetime calculation.



Technical data

Movement speed	max. 10 m/s
Repeat accuracy	0,05 mm
Drive element	Toothed belt 16 AT3
Permitted dyn. operating load	210 N
Stroke per revolution	75 mm
No-load torque	0,2 Nm
Moment of inertia	0,033 kgcm ²
Max. overall length	6m (one-piece) ¹⁾
Geometrical moment of inertia I_x	9,251 cm ⁴
Geometrical moment of inertia I_y	12,14 cm ⁴

¹⁾ Greater lengths on request.

Mass

Basic mass	1,0 kg
Mass per 100 mm stroke	0,2 kg
Sled mass	0,4 kg

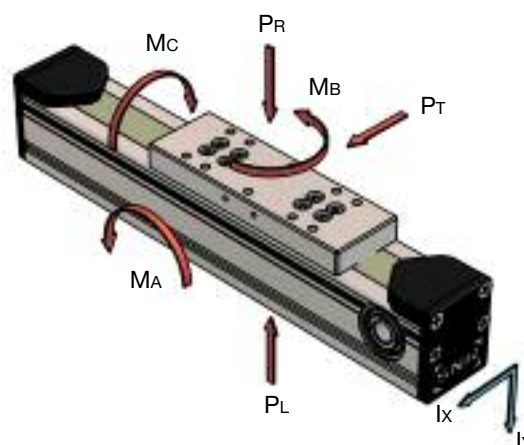
AXC 40-S

Linear axis with screw-type drive and rail guide

Loads and load torques*

Rail guide S9		
Loads [N]	dyn.	stat
P_R	660	910
P_L	660	910
P_T	660	910
Load torques [Nm]		
M_A	18	25
M_B	18	25
M_C	4,5	6

* Max. permitted loads in accordance with definition on page 17.
See from page 9 onwards for load ratings for individual lifetime calculation.



Technical data

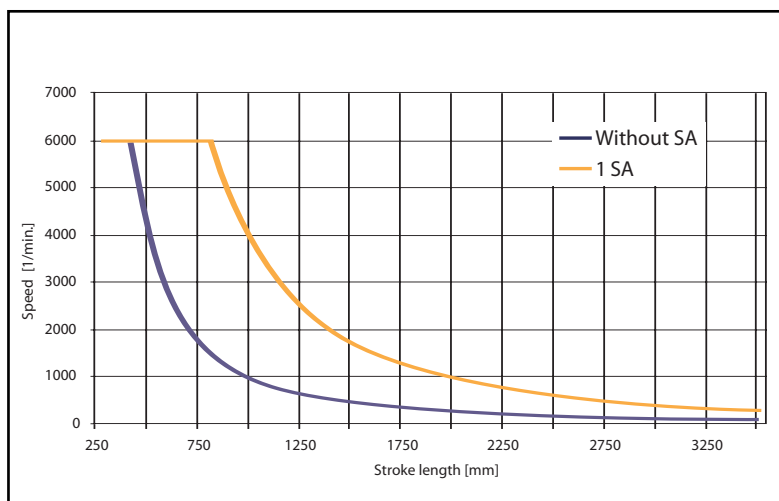
Movement speed	max. 1,0 m/s
Repeat accuracy	0,03 mm
Dyn. load rating ball screw	3,6 kN
No-load torque	0,3 Nm
Moment of inertia	0,11 kgcm ² /m
Max. overall length	3,5 m
Geometrical moment of inertia I_x	9,251 cm ⁴
Geometrical moment of inertia I_y	12,14 cm ⁴

Drive elements

	Diameter	Lead
Ball screw	12 mm	5; 10 mm
Trapezoidal screw thread	12 mm	3 mm

Mass

Basic mass	1,0 kg
Mass per 100 mm stroke	0,3 kg
Sled mass	0,4 kg



SA = Spindle support

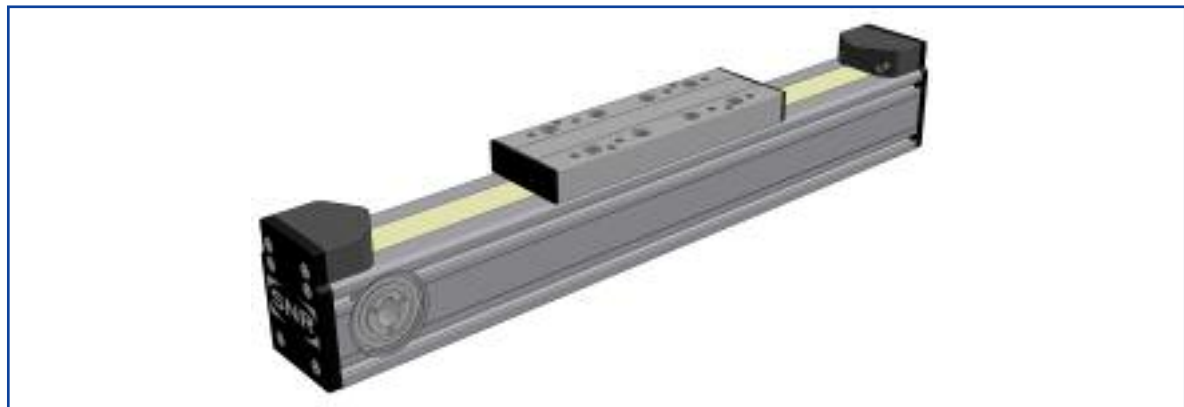
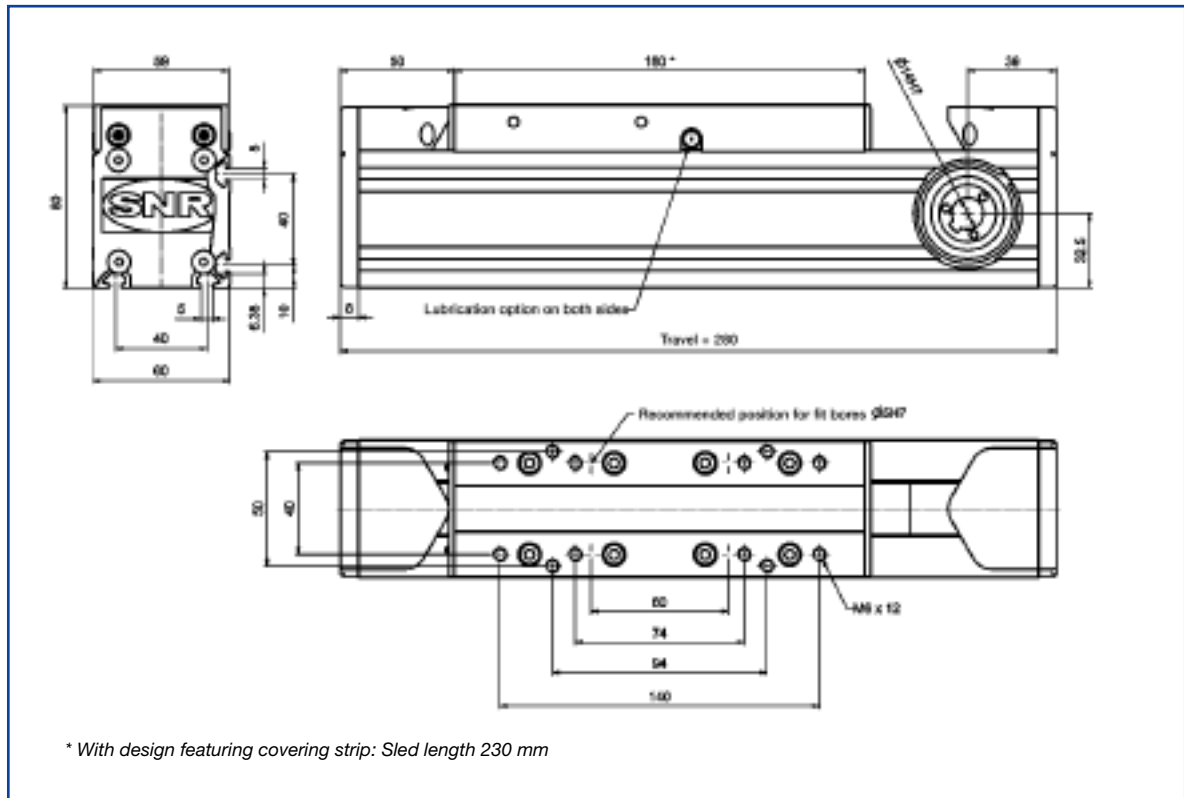
Subject to technical changes.

Compact modules



AXC 60-Z

Linear axis with toothed belt drive and rail or roller guide system



AXC 60-Z

Linear axis with toothed belt drive and rail or roller guide system

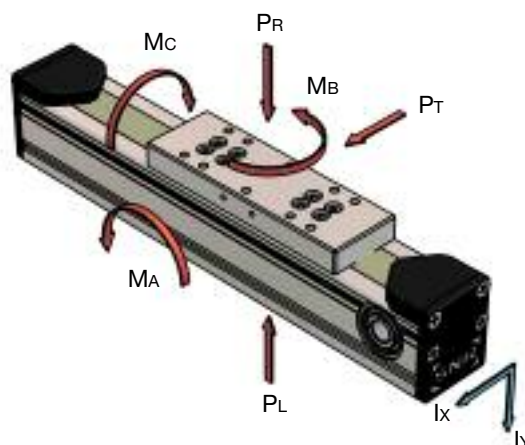
Loads and load torques*

Loads [N]	Roller guide system LR24		Rail guide			
	dyn.	stat	S15		H15	
P_R	550	550	2850	6500	2750	9650
P_L	550	550	1700	3300	2750	9650
P_T	850	850	1550	2800	2750	9650
Load torques [Nm]						
M_A	27	27	65	125	95	345
M_B	40	40	55	100	95	345
M_C	10	10	12	22	19	69

* Max. permitted loads in accordance with definition on page 17.
See from page 9 onwards for load ratings for individual lifetime calculation.

Technical data

Movement speed	max. 10 m/s (LR24)
Repeat accuracy	0,05 mm
Drive element	Toothed belt 25 AT5
Permitted dyn. operating load	560 N
Stroke per revolution	150 mm
No-load torque	0,8 Nm
Moment of inertia	0,74 kgcm ²
Max. overall length LR24	7 m
Max. overall length S/H15	8 m
Geometrical moment of inertia I_x	40,04 cm ⁴
Geometrical moment of inertia I_y	60,64 cm ⁴



Mass

	Roller guide system LR24	Rail guide	
		S15	H15
Basic mass	2,6 kg	2,8 kg	2,9 kg
Mass per 100 mm stroke	0,4 kg	0,5 kg	0,5 kg
Sled mass	1,0 kg	1,0 kg	1,1 kg

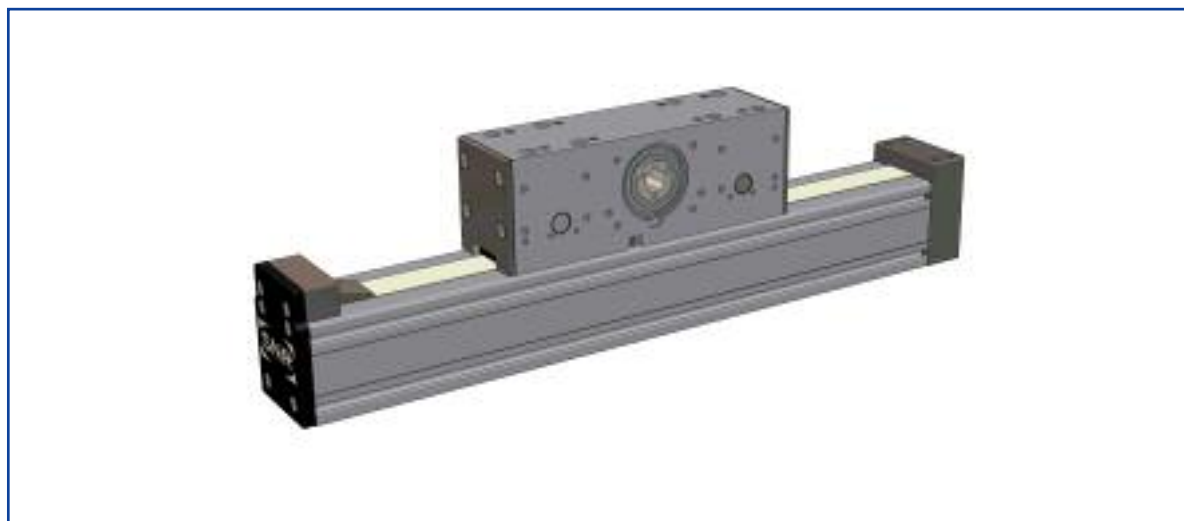
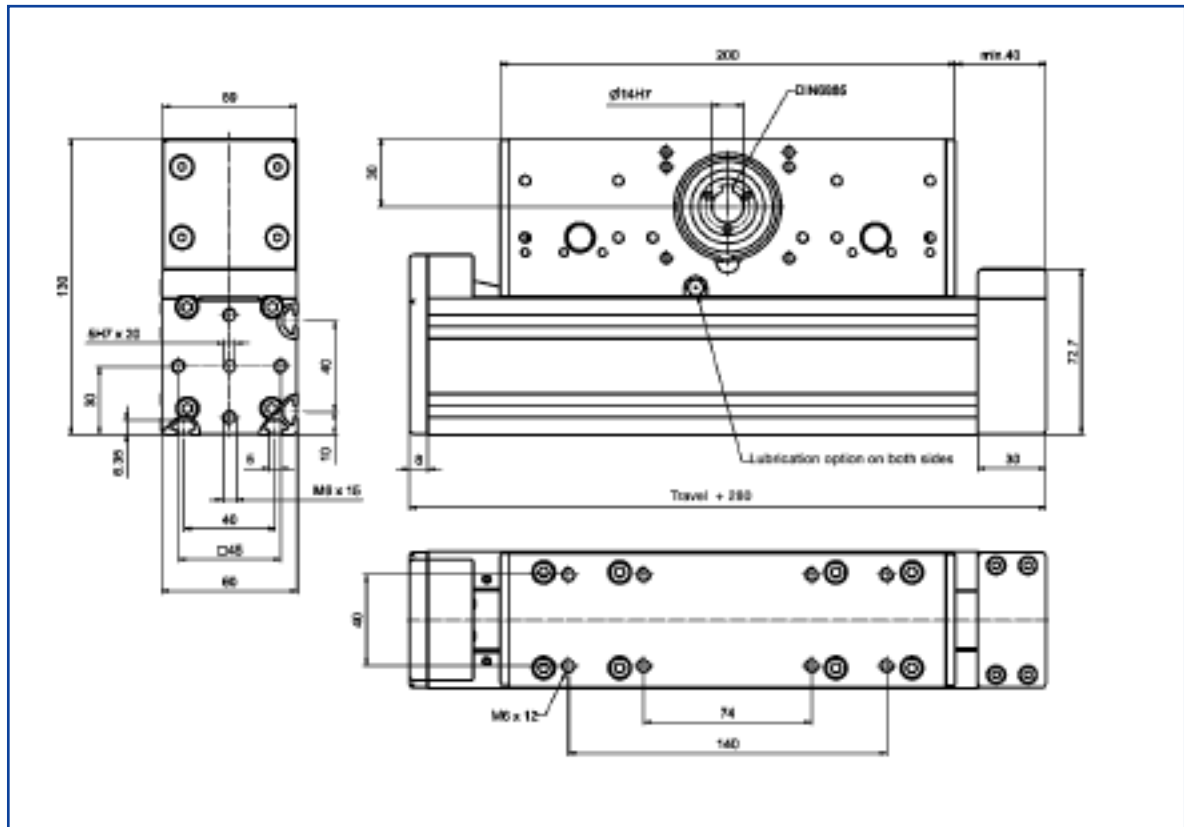
Subject to technical changes.

Compact modules



AXC 60-A

Linear axis with toothed belt drive and rail or roller guide system



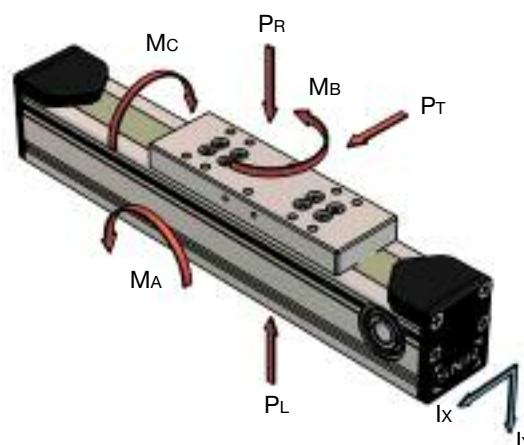
AXC 60-A

Linear axis with toothed belt drive and rail or roller guide system

Loads and load torques*

Loads [N]	Roller guide system LR24		Rail guide H15	
	dyn.	stat.	dyn.	stat.
P_R	550	550	2750	9650
P_L	550	550	2750	9650
P_T	850	850	2750	9650
Load torques [Nm]				
M_A	27	27	95	345
M_B	40	40	95	345
M_C	10	10	19	69

* Max. permitted loads in accordance with definition on page 17.
See from page 9 onwards for load ratings for individual lifetime calculation.



Technical data

Movement speed	max. 10 m/s (LR24)
Repeat accuracy	0,05 mm
Drive element	Toothed belt 25 AT5
Permitted dyn. operating load	560 N
Stroke per revolution	150 mm
No-load torque	0,8 Nm
Moment of inertia	1,07 kgcm ²
Max. overall length LR24	7 m
Max. overall length H15	8 m (one-piece) ¹⁾
Geometrical moment of inertia I_x	40,04 cm ⁴
Geometrical moment of inertia I_y	60,64 cm ⁴

¹⁾ Greater lengths on request

Mass

	Roller guide system	Rail guide
Basic mass	3,9 kg	4,6 kg
Mass per 100 mm stroke	0,4 kg	0,5 kg
Sled mass	2,2 kg	2,7 kg

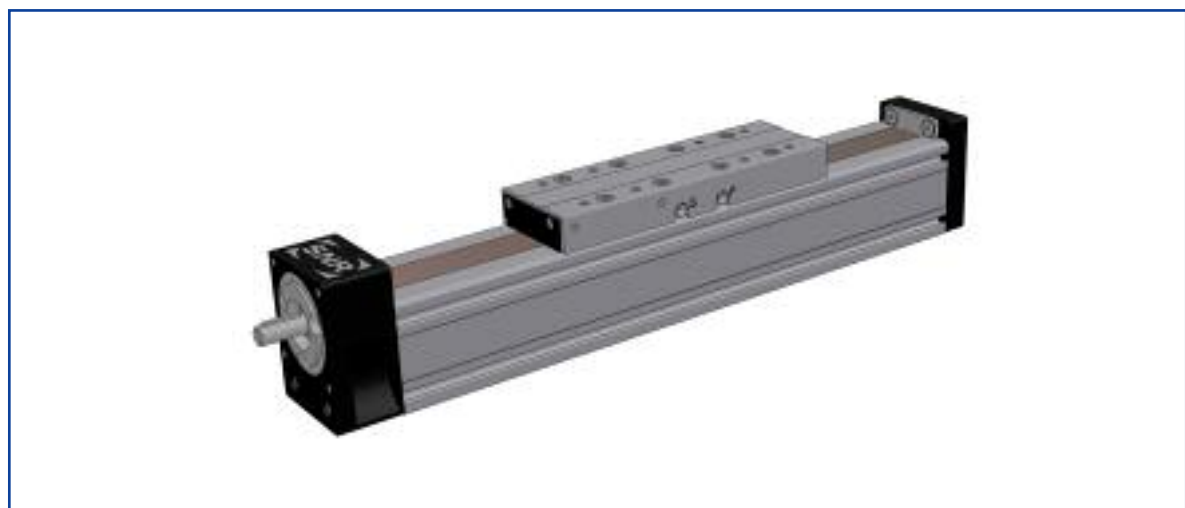
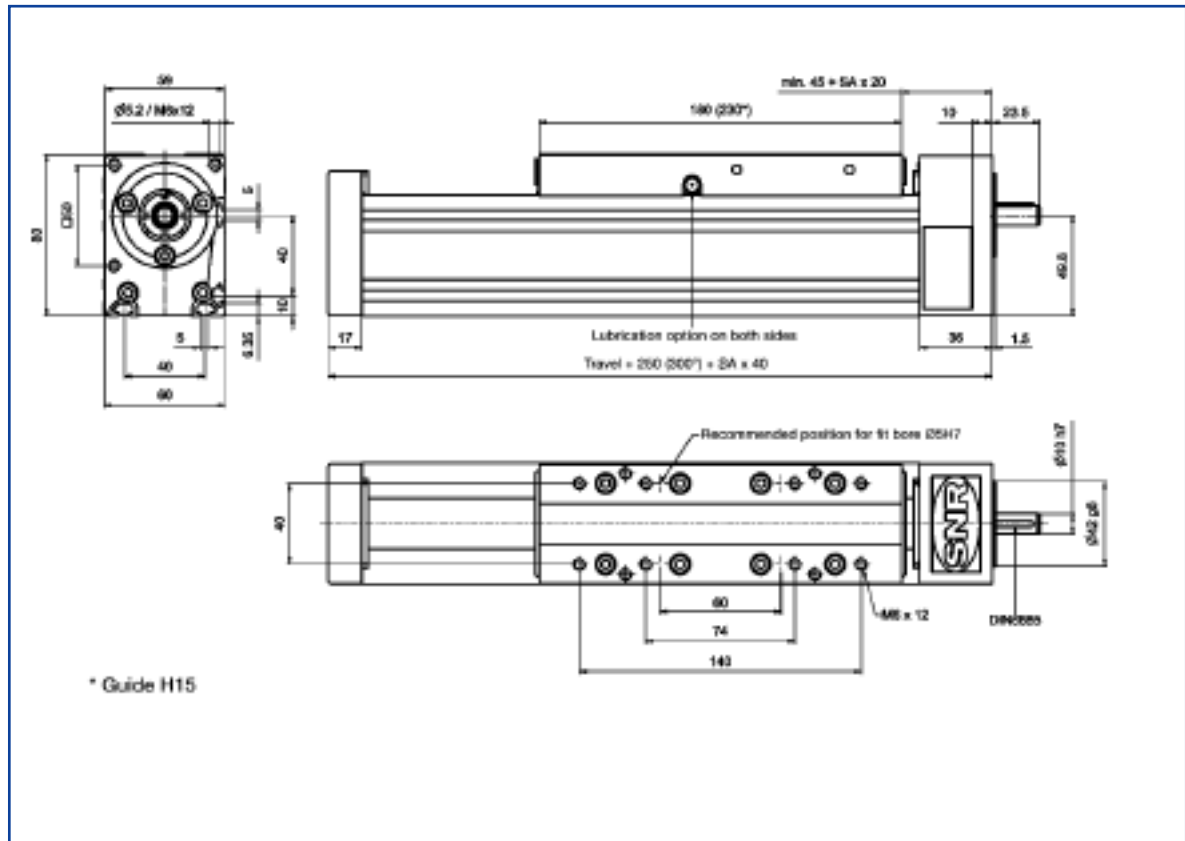
Subject to technical changes.

Compact modules



AXC 60-S

Linear axis with screw-type drive
and rail or roller guide system



AXC 60-S

Linear axis with screw-type drive and rail or roller guide system

Loads and load torques*

Loads [N]	Roller guide system LR24		Rail guide			
	dyn.	stat	S15		H15	
P _R	550	550	2200	3850	2750	9650
P _L	550	550	1350	1900	2750	9650
P _T	850	850	1200	1650	2750	9650
Load torques [Nm]						
M _A	27	27	70	100	200	570
M _B	40	40	58	75	200	570
M _C	10	10	9	13	24	69

* Max. permitted loads in accordance with definition on page 17. See from page 9 onwards for load ratings for individual lifetime calculation.

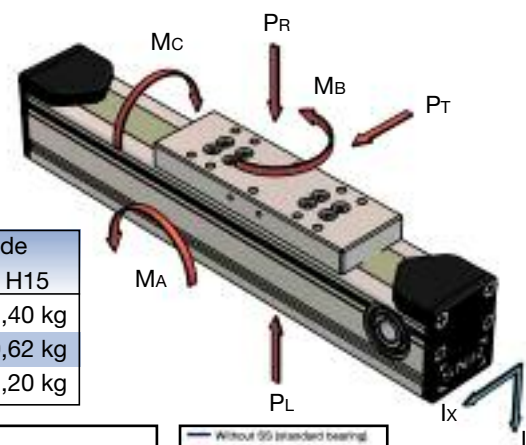
Technical data

Movement speed	max. 1,6 m/s
Repeat accuracy	0,03 mm
Dyn. load rating ball screw	6,3 bis 12,1 kN ¹⁾
No-load torque	0,4 Nm
Moments of inertia:	
Lead 5/10 mm	0,31 kgcm ² /m
Lead 16 mm	0,34 kgcm ² /m
Max. overall length	3,5 m
Geometrical moment of inertia I _x	40,04 cm ⁴
Geometrical moment of inertia I _y	60,64 cm ⁴

¹⁾ Depending on the design of the screw-type drive.

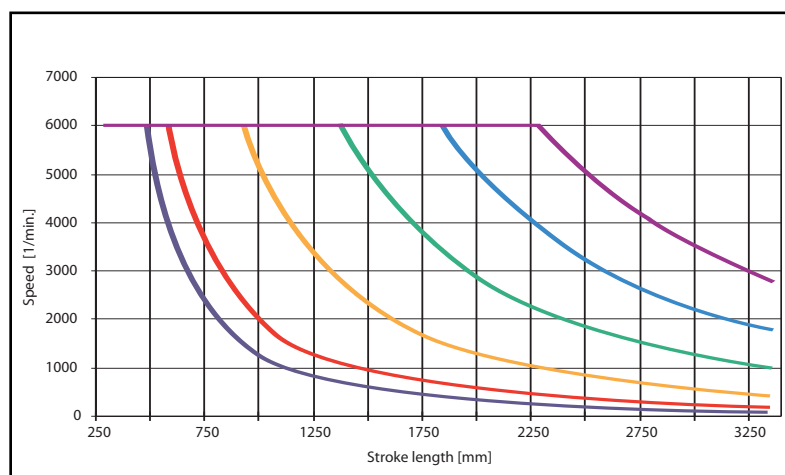
Drive elements

	Diameter	Lead
Ball screw	16 mm	5; 10; 16 mm
Trapezoidal screw thread	16 mm	4; 8 mm



Mass

	Roller guide system LR24	Rail guide	
		S15	H15
Basic mass	2,60 kg	2,70 kg	3,40 kg
Mass per 100 mm stroke	0,53 kg	0,61 kg	0,62 kg
Sled mass	0,90 kg	0,80 kg	1,20 kg



— Without 50 standard bearing
 — Ball/round bearing
 — 1 SA
 — 2 SA
 — 3 SA (only with S/H15)
 — 4 SA (with S15)

SA = Spindle support

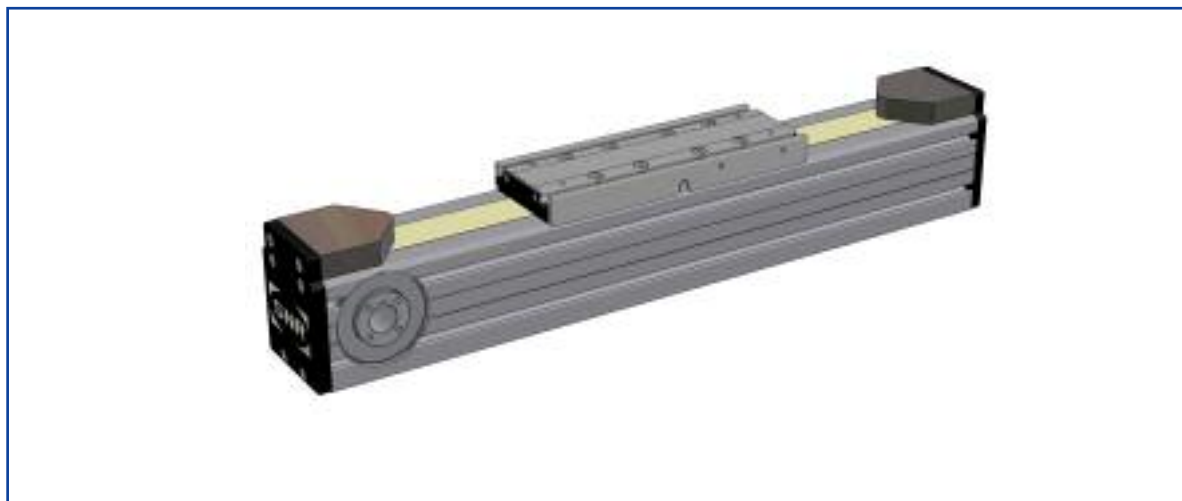
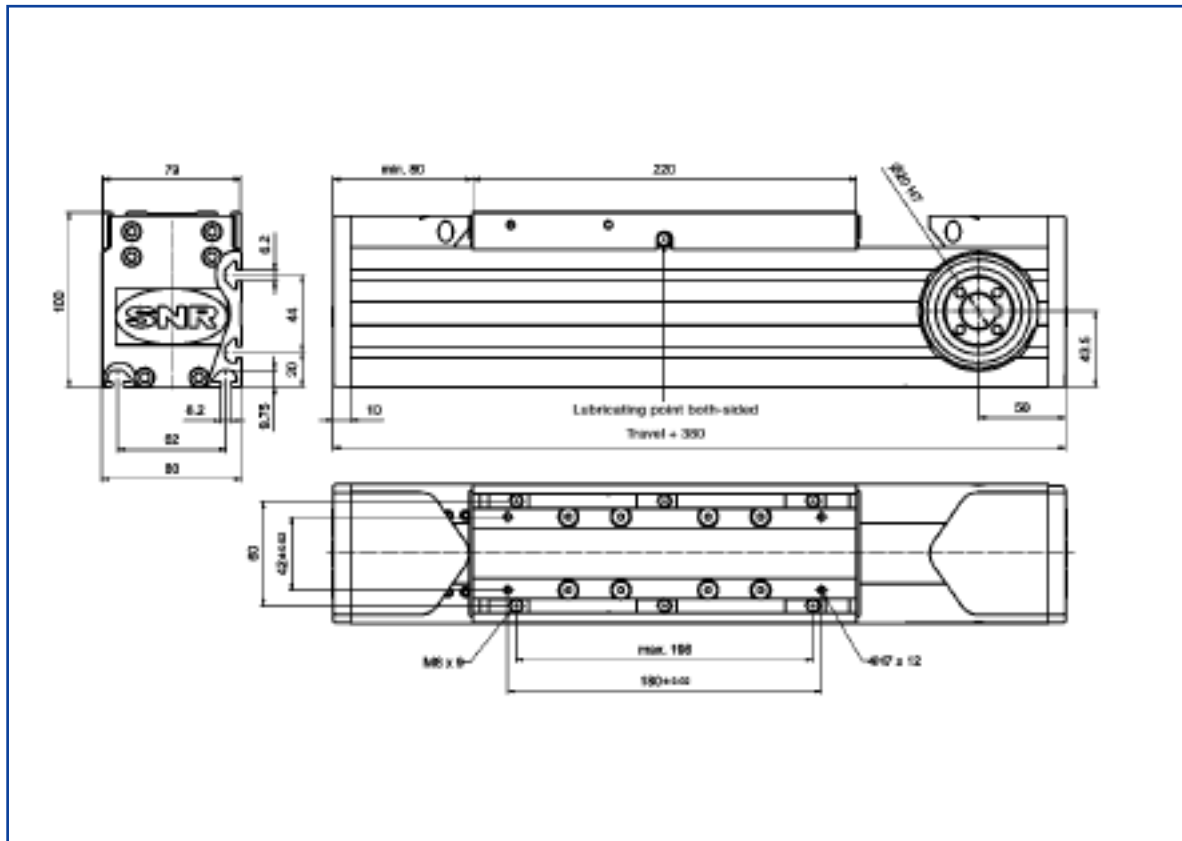
Subject to technical changes.

Compact modules



AXC 80-Z

Linear axis with toothed belt drive
and rail or roller guide system



AXC 80-Z

Linear axis with toothed belt drive and rail or roller guide system

Loads and load torques*

Loads [N]	Roller guide system LR47		Rail guide					
	dyn.	stat	S20		H20		W21	
P_R	2250	2250	3800	9200	4300	15000	1590	5100
P_L	2250	2250	2300	4600	4300	15000	1590	5100
P_T	3400	3400	2100	4000	4300	15000	1590	5100
Load torques [Nm]								
M_A	110	110	160	320	260	920	82	260
M_B	170	170	125	240	260	920	82	260
M_C	60	60	20	40	43	150	27	85

* Max. permitted loads in accordance with definition on page 17.
See from page 9 onwards for load ratings for individual lifetime calculation.

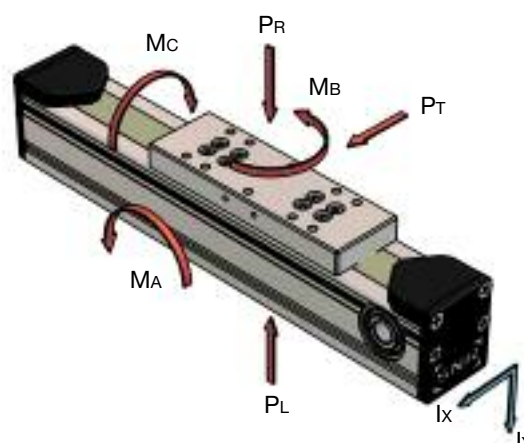
Technical data

Movement speed	max. 10 m/s (LR47)
Repeat accuracy	0,05 mm
Drive element	Toothed belt 32 ATL5
Permitted dyn. operating load	870 N
Stroke per revolution	200 mm
No-load torque	1,6 Nm
Moment of inertia	3,68 kgcm ²
Max. overall length	8 m (one-piece) ¹⁾
Geometrical moment of inertia I_x	146,9 cm ⁴
Geometrical moment of inertia I_y	199,2 cm ⁴

¹⁾ Greater lengths on request.

Mass

	Roller guide system LR47	Rail guide		
		S20	H20	W21
Basic mass	6,60 kg	6,00 kg	6,40 kg	6,00 kg
Mass per 100 mm stroke	0,79 kg	0,92 kg	0,94 kg	0,98 kg
Sled mass	2,00 kg	1,60 kg	1,90 kg	1,40 kg



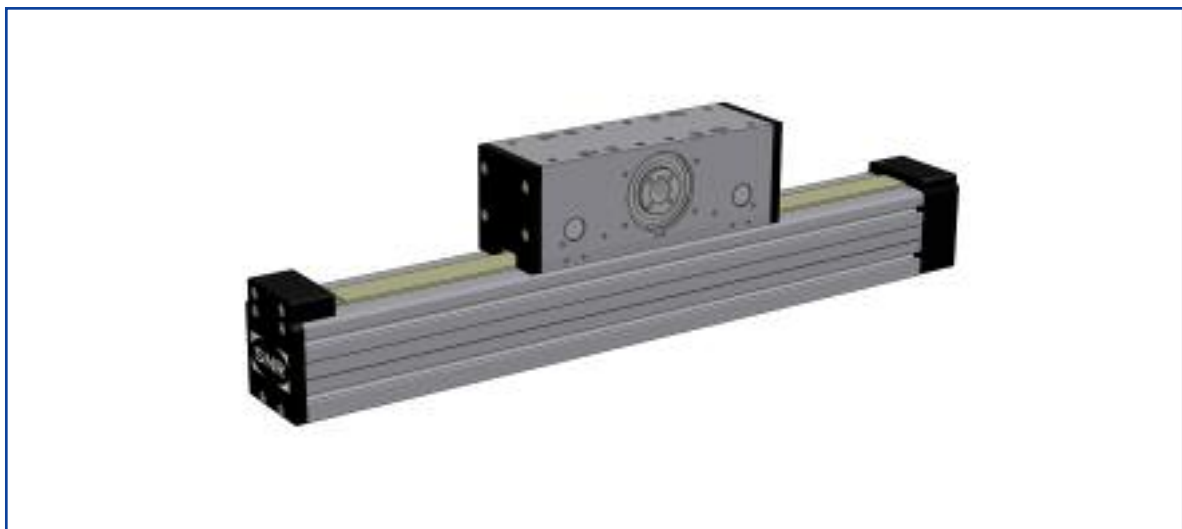
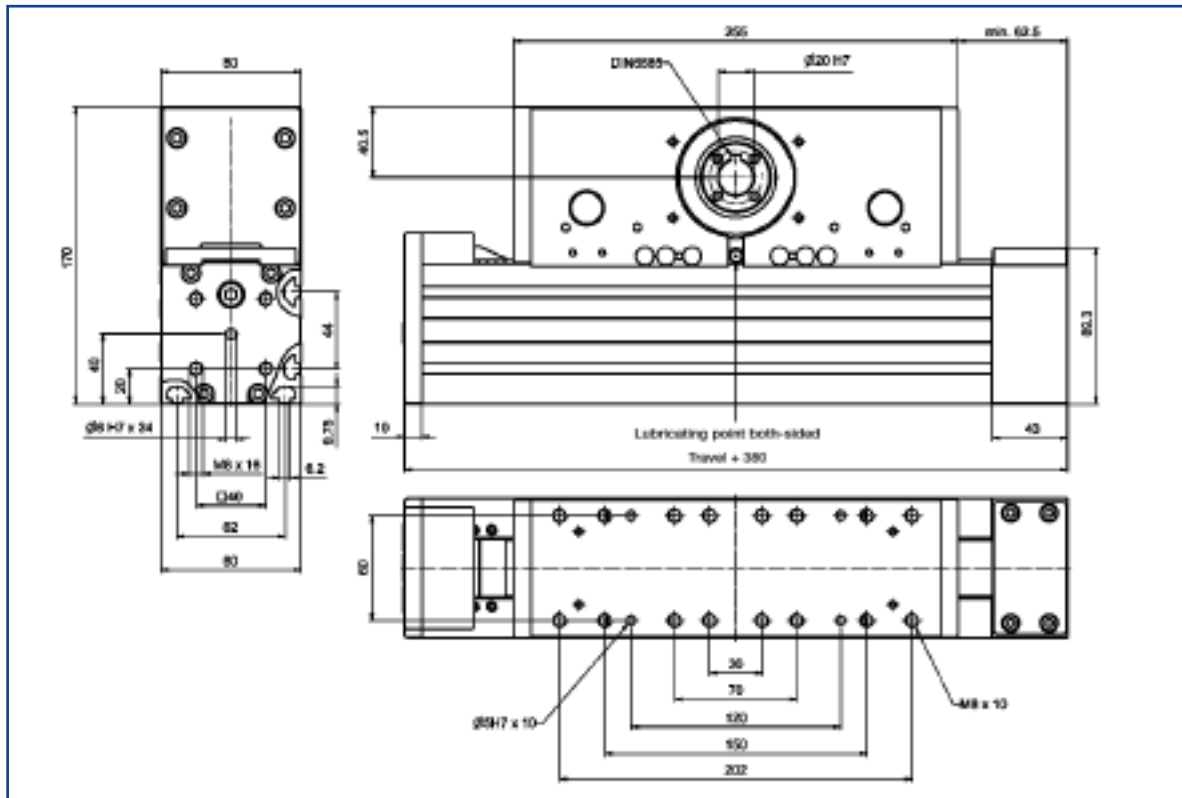
Subject to technical changes.

Compact modules



AXC 80-A

Linear axis with toothed belt drive
and rail or roller guide system



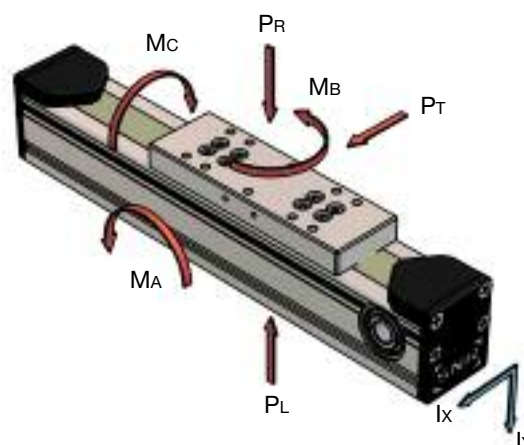
AXC 80-A

Linear axis with toothed belt drive and rail or roller guide system

Loads and load torques*

Loads [N]	Roller guide system LR47		Rail guide H20	
	dyn.	stat	dyn.	stat
P_R	2250	2250	4300	15000
P_L	2250	2250	4300	15000
P_T	3400	3400	4300	15000
Load torques [Nm]				
M_A	110	110	260	920
M_B	170	170	260	920
M_C	60	60	43	150

* Max. permitted loads in accordance with definition on page 17.
See from page 9 onwards for load ratings for individual lifetime calculation.



Technical data

Movement speed	max. 10 m/s (LR47)
Repeat accuracy	0,05 mm
Drive element	Toothed belt 32 ATL5
Permitted dyn. operating load	870 N
Stroke per revolution	200 mm
No-load torque	1,6 Nm
Moment of inertia	5,0 kgcm ²
Max. overall length	8 m (one-piece) ¹⁾
Geometrical moment of inertia Ix	146,9 cm ⁴
Geometrical moment of inertia Iy	199,2 cm ⁴

¹⁾ Greater lengths on request.

Mass

	Roller guide system	Rail guide
Basic mass	10,0 kg	10,6 kg
Mass per 100 mm stroke	0,7 kg	0,8 kg
Sled mass	5,5 kg	5,9 kg

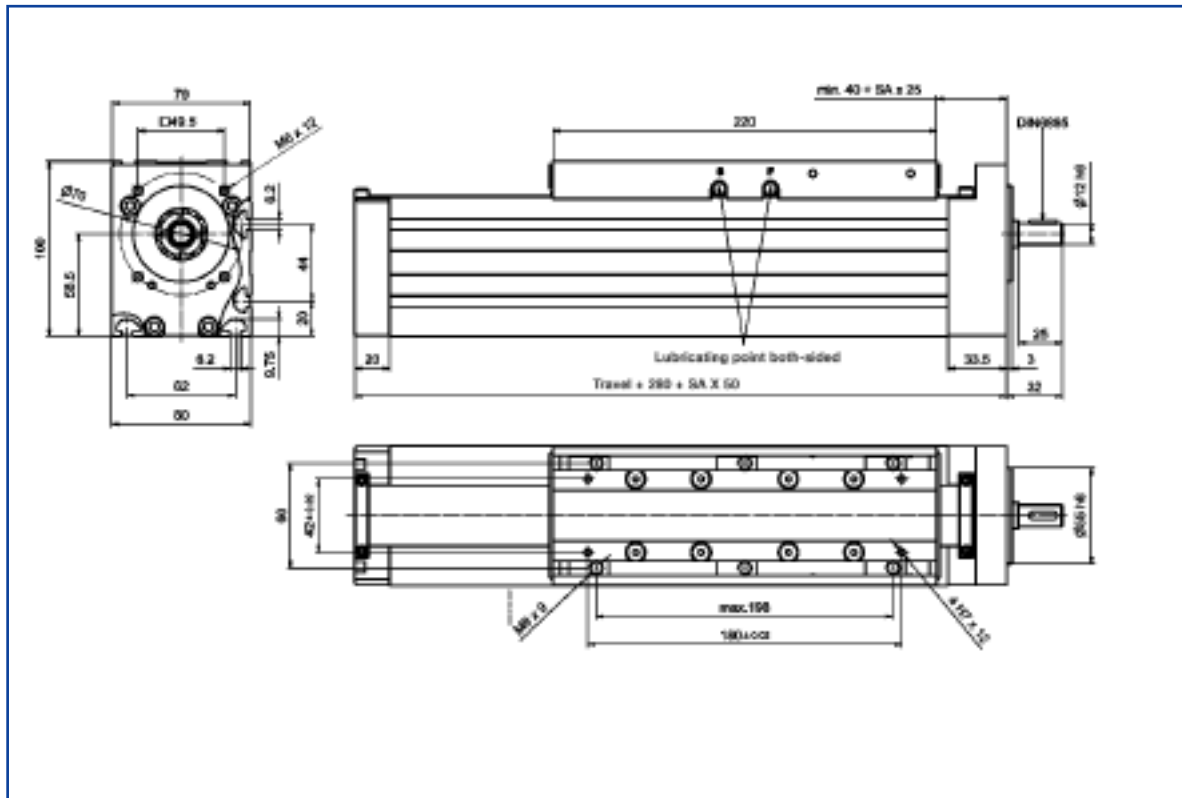
Subject to technical changes.

Compact modules



AXC 80-S

Linear axis with screw-type drive and rail guide



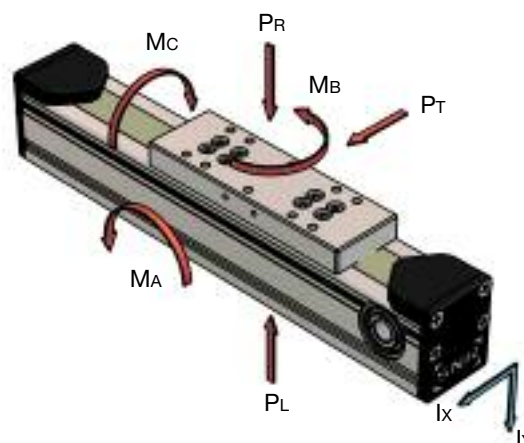
AXC 80-S

Linear axis with screw-type drive and rail guide

Loads and load torques*

Rail guide W21		
Loads [N]	dyn.	stat
P_R	2000	5100
P_L	2000	5100
P_T	2000	5100
Load torques [Nm]		
M_A	120	310
M_B	120	310
M_C	34	85

* Max. permitted loads in accordance with definition on page 17.
See from page 9 onwards for load ratings for individual lifetime calculation.



Technical data

Movement speed	max. 2 m/s
Repeat accuracy	0,03 mm
Dyn. load rating ball screw	7,9 bis 17,5 kN ¹⁾
No-load torque	0,4 - 0,6 Nm
Moments of inertia:	
Lead 5 mm	0,84 kgcm ² /m
Lead 20 mm	0,81 kgcm ² /m
Lead 50 mm	0,79 kgcm ² /m
Max. overall length	3,5 m ²⁾
Geometrical moment of inertia I _x	146,9 cm ⁴
Geometrical moment of inertia I _y	199,2 cm ⁴

¹⁾ Depending on the design of the screw-type drive.

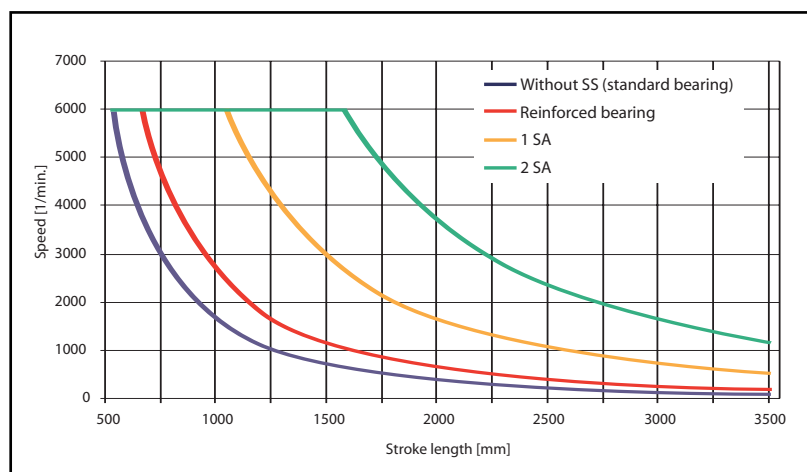
²⁾ Greater lengths on request.

Drive elements

	Diameter	Lead
Ball screw	20 mm	5; 20; 50 mm
Trapezoidal screw thread	20 mm	4; 8 mm

Mass

	Rail guide
Basic mass	5,80 kg
Mass per 100 mm stroke	1,23 kg
Sled mass	1,70 kg



SS = Spindle support

Subject to technical changes.

AXC 120-Z

Linear axis with toothed belt drive and rail or roller guide system

Loads and load torques*

	Roller guide system LR47		Rail guide					
	dynamic	static	S30		H30		W35	
Loads [N]			dynamic	static	dynamic	static	dyn.	static
P_R	3400(4500)	3400(4500)	9000	21000	8700(10500)	26500(35500)	6900	19500
P_L	3400(4500)	3400(4500)	5500	10500	8700(10500)	26500(35500)	6900	19500
P_T	5100(6800)	5100(6800)	4950	9000	8700(10500)	26500(35500)	6900	19500
Load torques [Nm]								
M_A	255(530)	255(530)	600(1500)	1150(2850)	730(1750)	2250(5900)	580	1650
M_B	385(790)	385(790)	440(880)	810(1600)	730(1750)	2250(5900)	580	1650
M_C	110(150)	110(150)	65	130	120(145)	365(490)	220	635

Values in parentheses for version with long sled plate (600 mm).

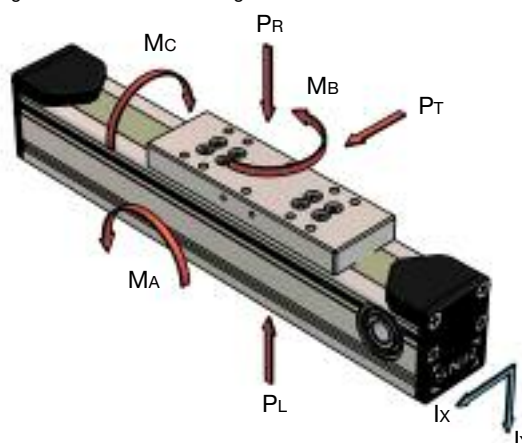
* Max. permitted loads in accordance with definition on page 17. See from page 9 onwards for load ratings for individual lifetime calculation.

Technical data

Movement speed	max. 10 m/s (LR47)
Repeat accuracy	0,05 mm
Drive element	Toothed belt 50 AT10
Permitted dyn. operating load	2500 N ²⁾
Stroke per revolution	320 mm
No-load torque	4 Nm
Moment of inertia	29,9 kgcm ²
Max. overall length	10 m (one-piece) ¹⁾
Geometrical moment of inertia IX	661,1 cm ⁴
Geometrical moment of inertia IY	938,57 cm ⁴

¹⁾ Greater lengths on request.

²⁾ In the version with integrated planetary gear this value is reduced to 2000 N.



Mass

	Roller guide system LR47	Rail guide		
		S30	H30	W35
Basic mass	20,1 kg	19,6 (25,7) kg	21,6 (29) kg	24,4 kg
Mass per 100 mm stroke	1,4 kg	1,7 kg	2,1 kg	2,7 kg
Sled mass	6,2 kg	5,7 (7,8) kg	6,4 (8,8) kg	5,9 kg

Values in parentheses for version with long sled plate (600 mm).

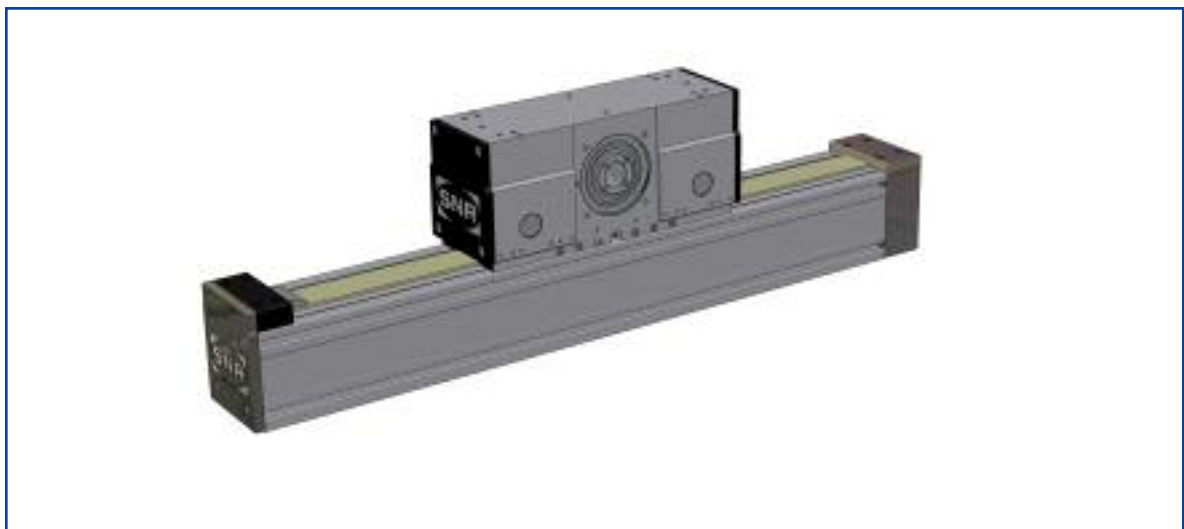
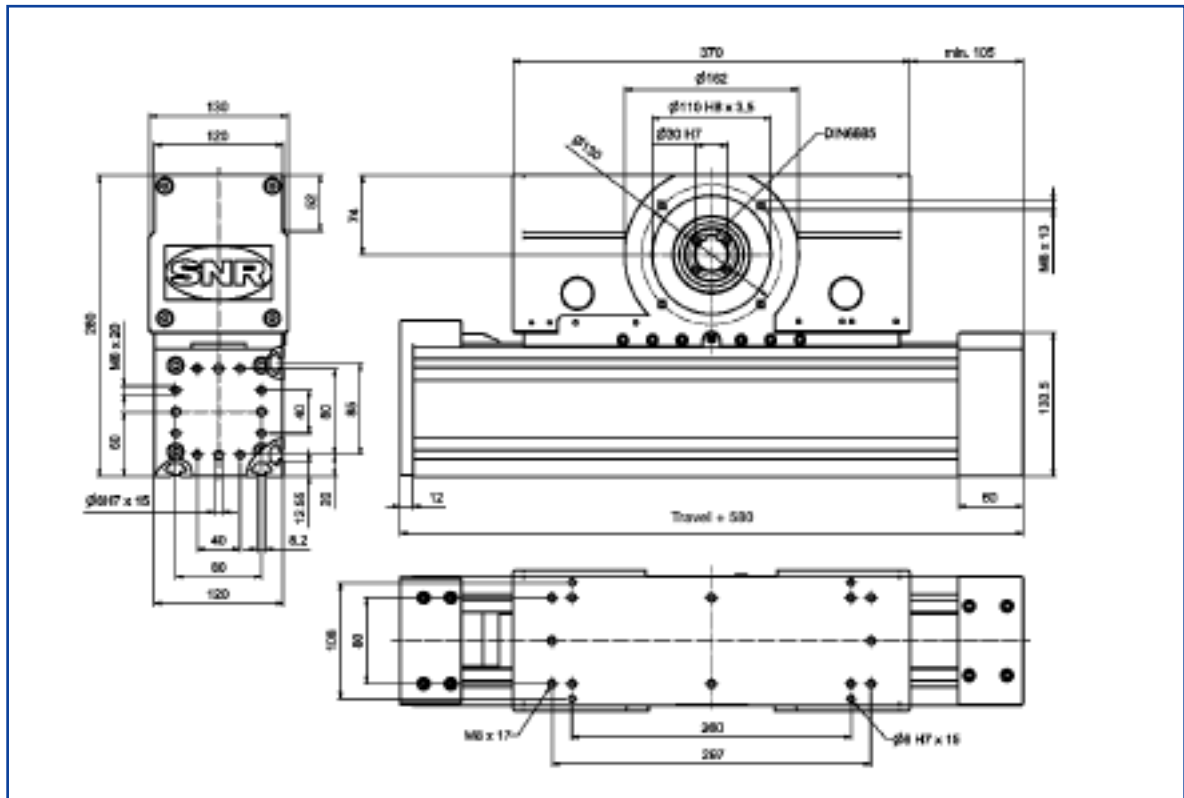
Subject to technical changes.

Compact modules



AXC 120-A

Linear axis with toothed belt drive
and rail or roller guide system



AXC 120-A

Linear axis with toothed belt drive and rail or roller guide system

Loads and load torques*

Loads [N]	Roller guide system LR47		Rail guide			
	dyn.	stat	S30		H30	
P_R	2250	2250	9000	21000	8700	26500
P_L	2250	2250	5500	10500	8700	26500
P_T	3400	3400	4950	9000	8700	26500
Load torques [Nm]						
M_A	255	255	600	1150	790	2400
M_B	385	385	440	810	790	2400
M_C	75	75	65	130	120	365

* Max. permitted loads in accordance with definition on page 17.
See from page 9 onwards for load ratings for individual lifetime calculation.

Technical data

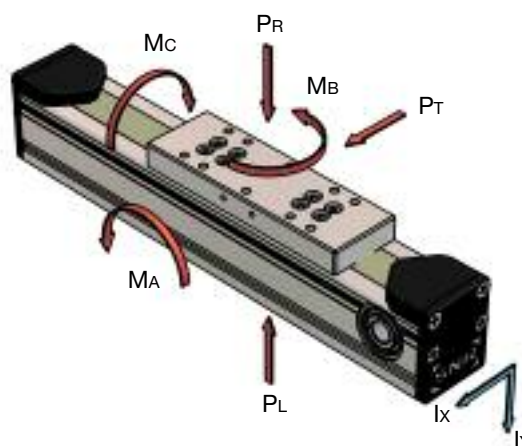
Movement speed	max. 10 m/s (LR47)
Repeat accuracy	0,05 mm
Drive element	Toothed belt 50 AT10
Permitted. dyn. operating load	2500 N ²⁾
Stroke per revolution	320 mm
No-load torque	4 Nm
Moment of inertia	73,7 kgcm ²
Max. overall length	10 m (one-piece) ¹⁾
Geometrical moment of inertia I_x	661,10 cm ⁴
Geometrical moment of inertia I_y	938,57 cm ⁴

¹⁾ Greater lengths on request.

²⁾ In the version with integrated planetary gears, this value is reduced to 2000 N.

Mass

	Roller guide system LR47	Rail guide	
		S30	H30
Basic mass	23,4 kg	22,9 kg	24,9 kg
Mass per 100 mm stroke	1,4 kg	1,7 kg	2,1 kg
Sled mass	12,8 kg	12,3 kg	13,0 kg

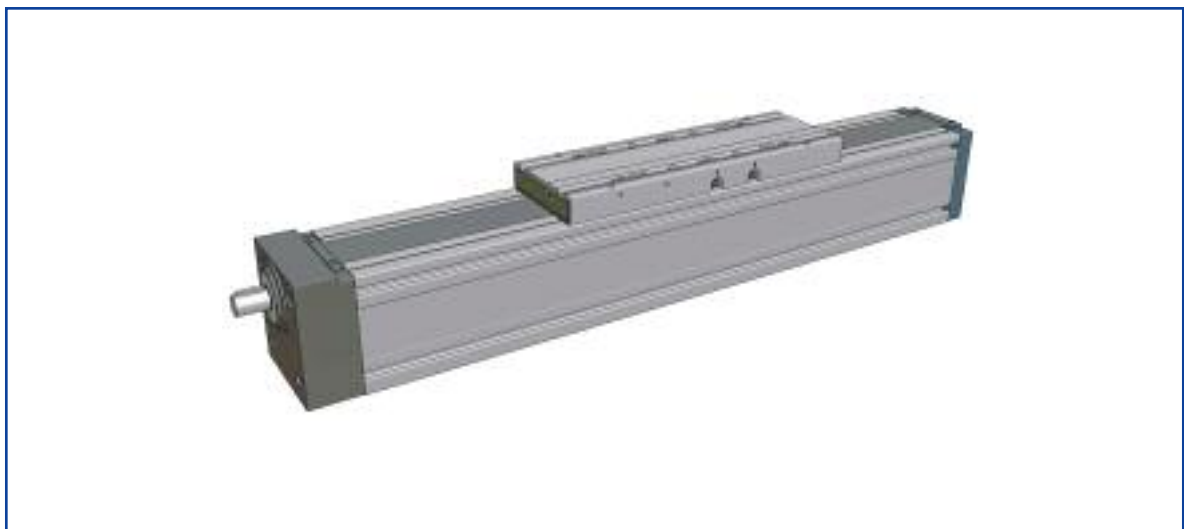
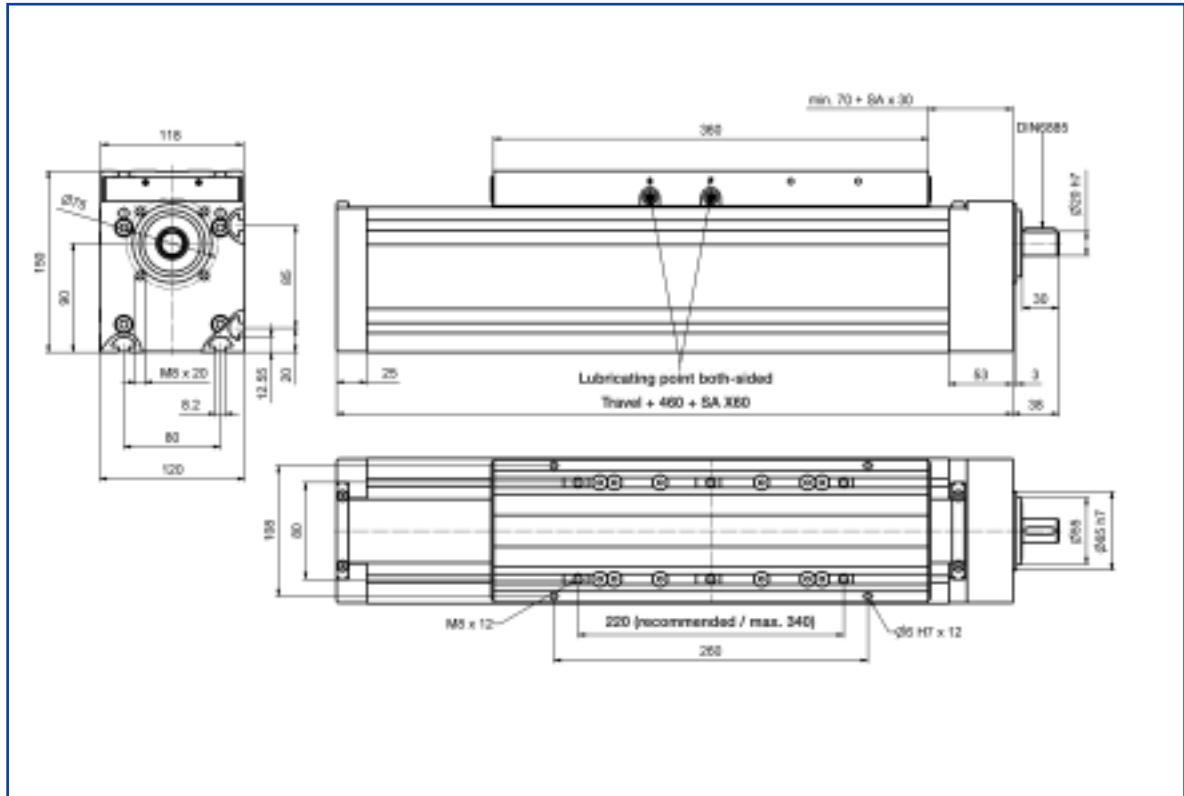


Compact modules



AXC 120-S

Linear axis screw-type drive and rail or roller guide system



AXC 120-S

Linear axis screw-type drive and rail or roller guide system

Loads and load torques*

	Roller guide system LR47		Rail guide					
	dynamic	static	S30		H30		R20	
Loads [N]			dynamic	static	dynamic	static	dynamic	static
P_R	2250	2250	11400	21000	11000	26500	6600	18300
P_L	2250	2250	6950	10500	11000	26500	6600	18300
P_T	3400	3400	6250	9000	11000	26500	6600	18300
Load torques [Nm]								
M_A	255	255	740	1130	950	2350	570	1580
M_B	385	385	550	800	950	2350	570	1580
M_C	75	75	85	130	150	365	180	495

* Max. permitted loads in accordance with definition on page 17. See from page 9 onwards for load ratings for individual lifetime calculation.

Technical data

Movement speed	max. 2 m/s
Repeat accuracy	0,03 mm
Dyn. load rating ball screw	19,5 bis 31,7 kN ¹⁾
No-load torque	1,0 - 1,3 Nm
Moments of inertia:	
Lead 5 mm	6,05 kgcm ² /m
Lead 10/20 mm	6,40 kgcm ² /m
Lead 32 mm	6,17 kgcm ² /m
Max. overall length	5,5 m
Geometrical moment of inertia I_x	661,1 cm ⁴
Geometrical moment of inertia I_y	938,57 cm ⁴

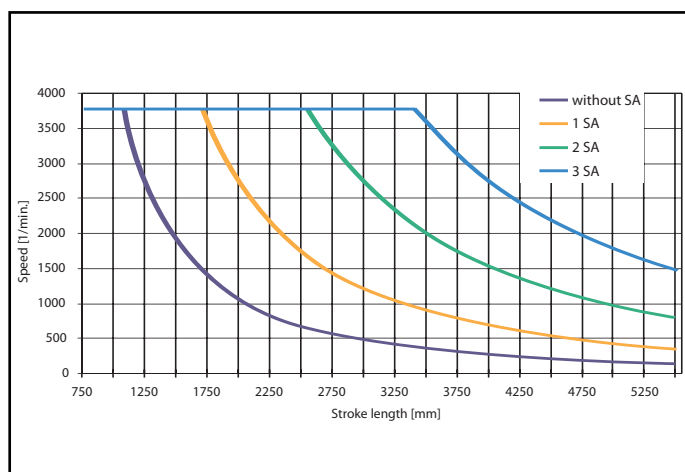
¹⁾ Depending on the design of the screw-type drive.

Drive elements

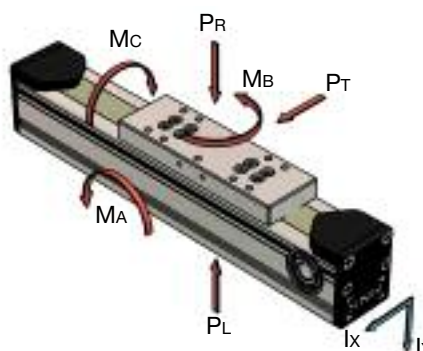
	Diameter	Lead
Ball screw	32 mm	5; 10; 20; 32 mm
Trapezoidal screw thread	36 mm	6; 12 mm

Mass

	Roller guide system LR24	Rail guide	
		S30/H30	R20
Basic mass	20 kg	20,5 kg	19,9 kg
Mass per 100 mm stroke	2 kg	2,4 kg	2,4 kg
Sled mass	6,7 kg	7,2 kg	6,5 kg



Subject to technical changes.



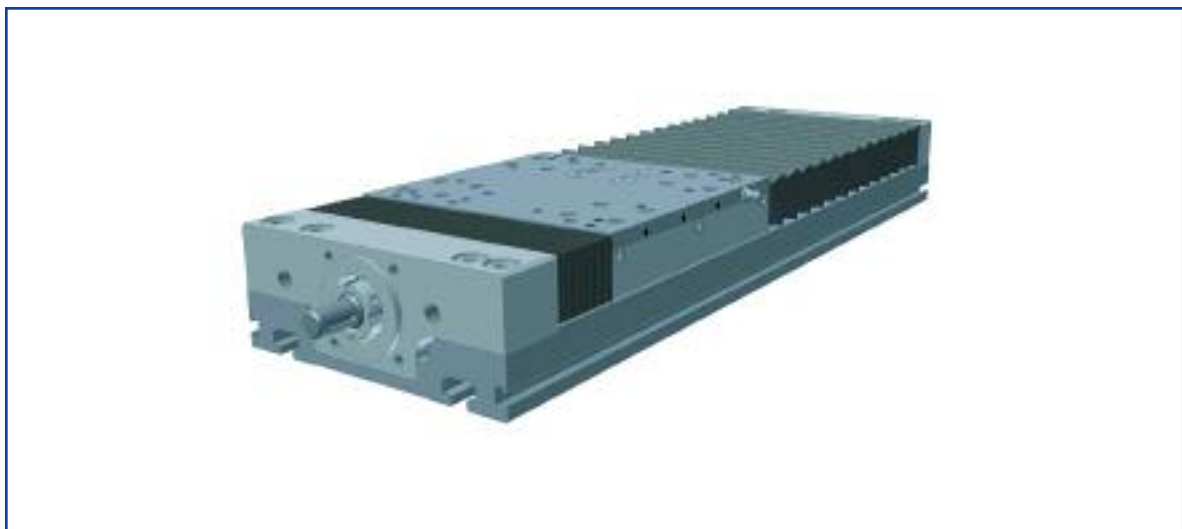
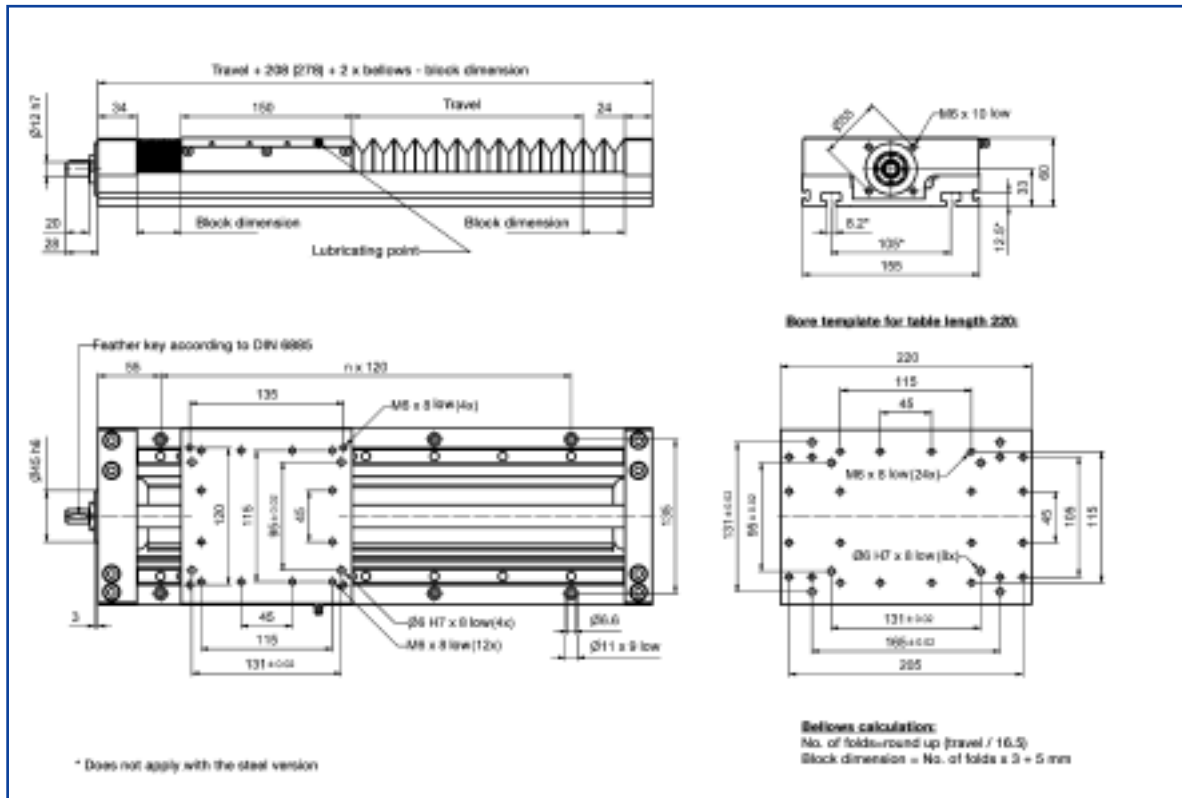
SA= Spindle support

Linear tables



AXLT155

Linear table with screw-type drive and rail guide



AXLT155

Linear table with screw-type drive and rail guide

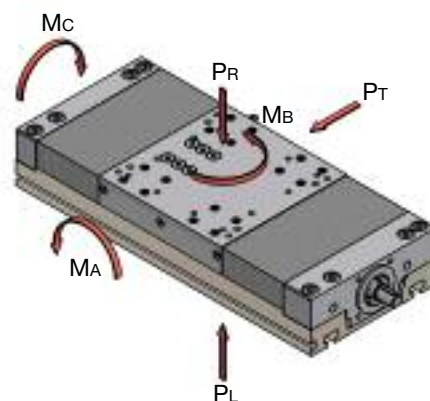
Loads and load torques*

	Rail guide			
	H15		H15*	
Loads [N]	dyn.	stat	dyn.	stat
P _R	6900	19000	6900	19000
P _L	6900	19000	6900	19000
P _T	6900	19000	6900	19000
Load torques [Nm]				
M _A	280	790	420	1100
M _B	280	790	420	1100
M _C	340	950	340	950

* Table length: 220 mm

* Max. permitted loads in accordance with definition on page 17.

See from page 9 onwards for load ratings for individual lifetime calculation.



Technical data

Movement speed	max. 2 m/s
Repeat accuracy	0,03 mm
Dyn. load rating ball screw	9,1 bis 17,5 kN ¹⁾
No-load torque	0,6 - 0,8 Nm
Moments of inertia:	
Lead 5 mm	0,84 kgcm ² /m
Lead 20 mm	0,81 kgcm ² /m
Lead 50 mm	0,79 kgcm ² /m
Max. overall length	3,5 m

¹⁾ Depending on the design of the screw-type drive.

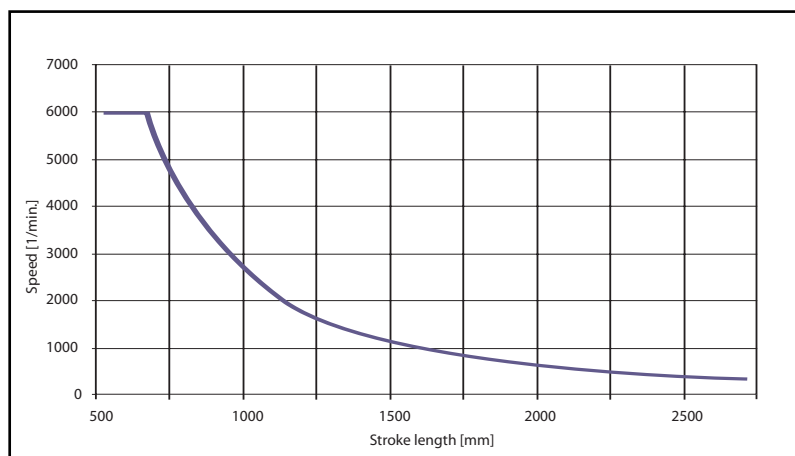
Drive elements

	Diameter	Lead
Ball screw	20 mm	5, 20 mm
Trapezoidal screw thread	20 mm	4, 8 mm

Mass

	Schienenführung	
	H15	H15*
Basic mass	5,5 kg	6,2 kg
Mass per 100 mm stroke	1,2 kg	1,2 kg
Sled mass	2 kg	2,3 kg

* Table length: 220 mm



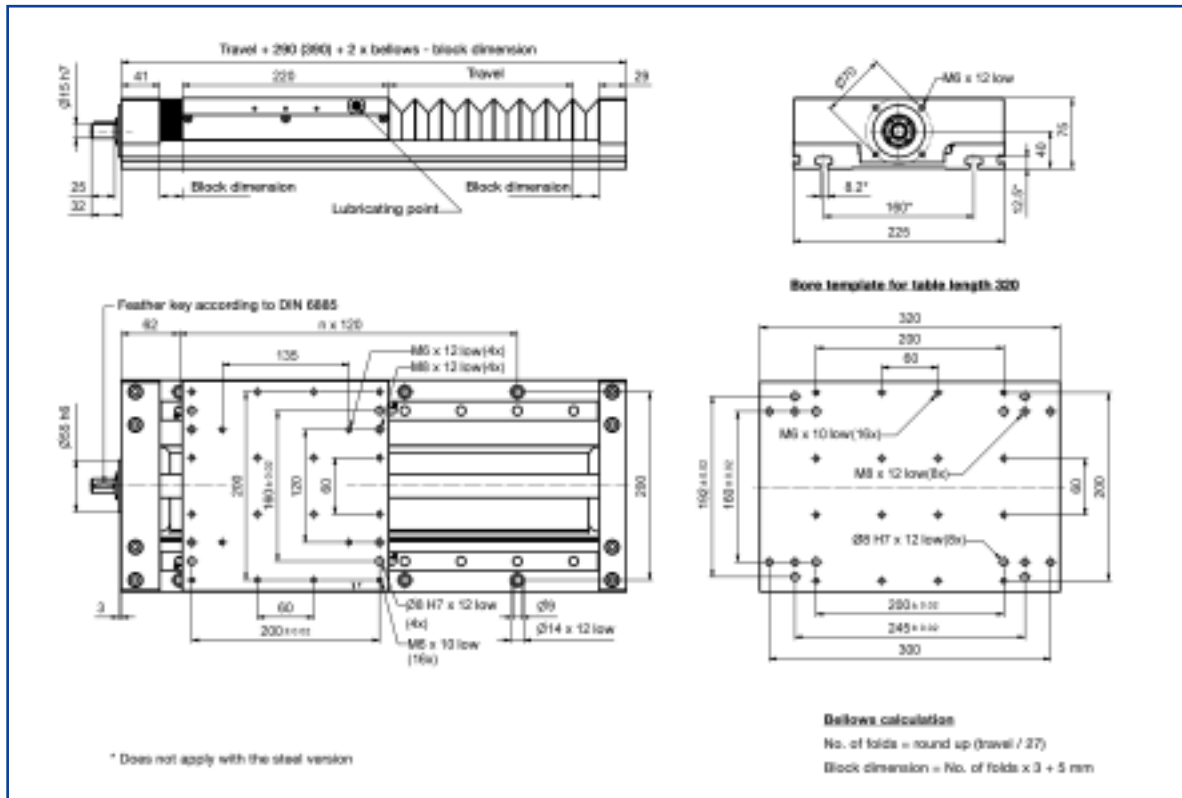
Subject to technical changes.

Linear tables



AXLT225

Linear table with screw-type drive and rail guide



AXLT225

Linear table with screw-type drive and rail guide

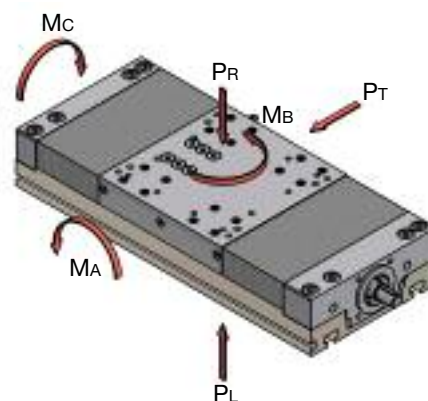
Loads and load torques*

	Rail guide			
	H20		H20 *	
Loads [N]	dyn.	stat	dyn.	stat
P _R	10900	30000	10900	30000
P _L	10900	30000	10900	30000
P _T	10900	30000	10900	30000
Load torques [Nm]				
M _A	720	2000	930	2600
M _B	720	2000	930	2600
M _C	810	2250	810	2250

* Table length: 320 mm

* Max. permitted loads in accordance with definition on page 17.

See from page 9 onwards for load ratings for individual lifetime calculation.



Technical data

Movement speed	max. 2 m/s
Repeat accuracy	0,03 mm
Dyn. load rating ball screw	14,7 bis 15,9 kN ¹⁾
No-load torque	0,7 - 1,2 Nm
Moments of inertia:	
Lead 5 mm	2,22 kgcm ² /m
Lead 10 mm	2,39 kgcm ² /m
Lead 25 mm	2,15 kgcm ² /m
Max. overall length	3,5 m

¹⁾ Depending on the design of the screw-type drive.

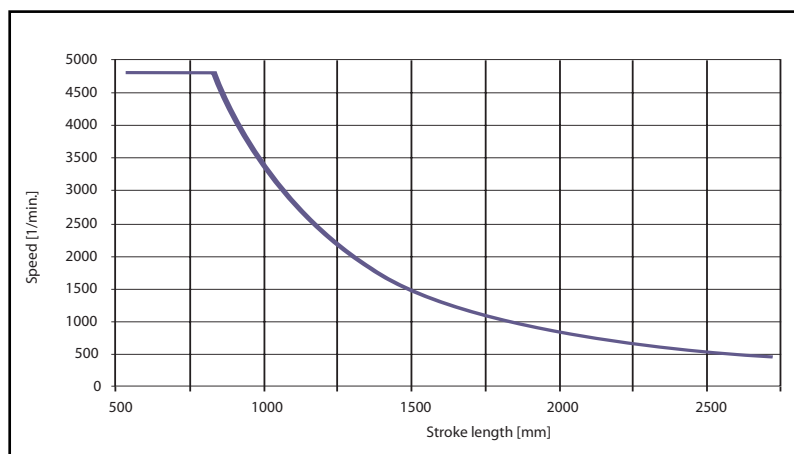
Drive elements

	Diameter	Lead
Ball screw	25 mm	5, 10, 25 mm
Trapezoidal screw thread	24 mm	5, 10 mm

Mass

	Rail guide	
	H20	H20 *
Basic mass	13,0 kg	15,8 kg
Mass per 100 mm stroke	1,8 kg	1,8 kg
Sled mass	5,0 kg	6,0 kg

* Table length: 320 mm



Subject to technical changes.

AXLT325

Linear table with screw-type drive and rail guide

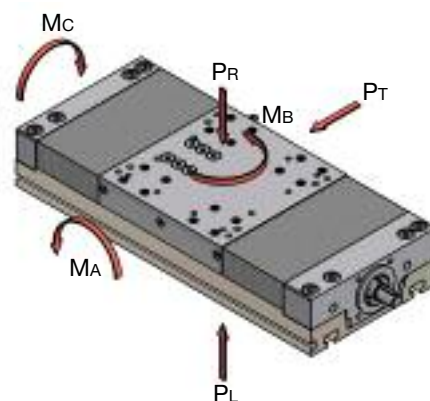
Loads and load torques*

	Rail guide			
	H30		H30 *	
Loads [N]	dyn.	stat	dyn.	stat
P _R	22000	53000	22000	53000
P _L	22000	53000	22000	53000
P _T	22000	53000	22000	53000
Load torques [Nm]				
M _A	2000	4900	2700	6500
M _B	2000	4900	2700	6500
M _C	2250	5500	2250	5500

* Table length: 450 mm

* Max. permitted loads in accordance with definition on page 17.

See from page 9 onwards for load ratings for individual lifetime calculation.



Technical data

Movement speed	max. 2 m/s
Repeat accuracy	0,03 mm
Dyn. load rating ball screw	19,5 bis 31,7 kN ¹⁾
No-load torque	1,1 - 1,5 Nm
Moments of inertia:	
Lead 5 mm	6,05 kgcm ² /m
Lead 10/20 mm	6,40 kgcm ² /m
Lead 32 mm	6,17 kgcm ² /m
Max. overall length	3,2 m

¹⁾ Depending on the design of the screw-type drive.

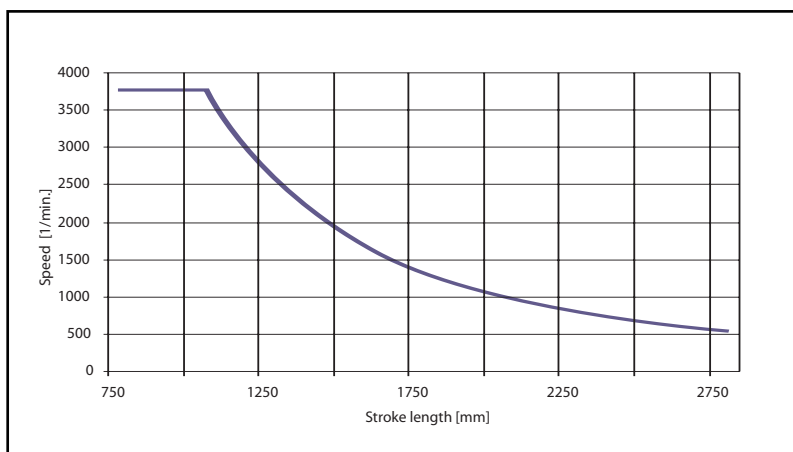
Drive elements

	Diameter	Lead
Ball screw	32 mm	5, 10, 20, 32
Trapezoidal screw thread	36 mm	6, 12 mm

Mass

	Rail guide	
	H30	H30 *
Basic mass	31,5 kg	38,7 kg
Mass per 100 mm stroke	3,5 kg	3,5 kg
Sled mass	12,0 kg	14,6 kg

* Table length: 450 mm



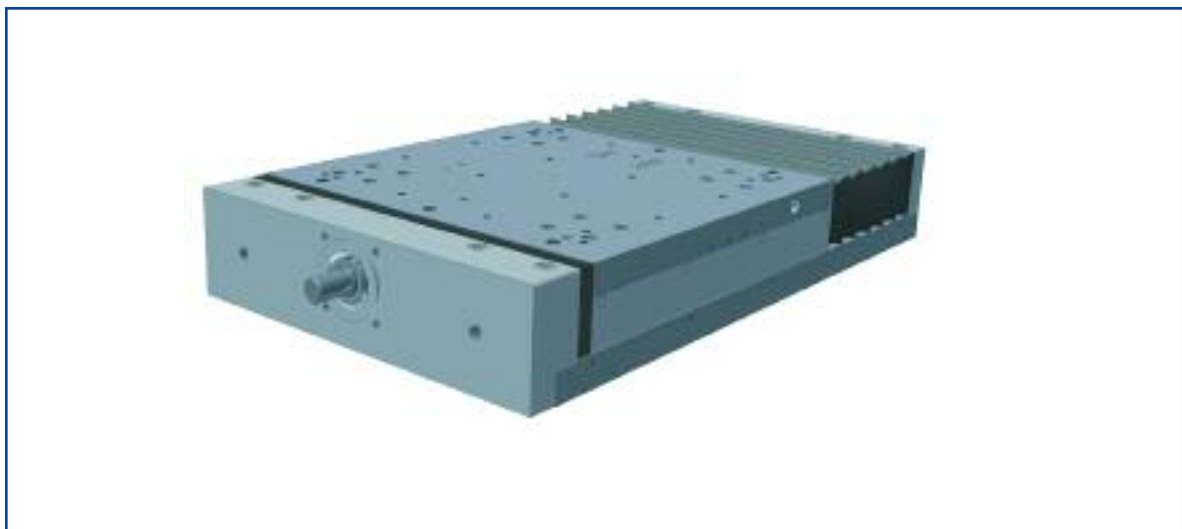
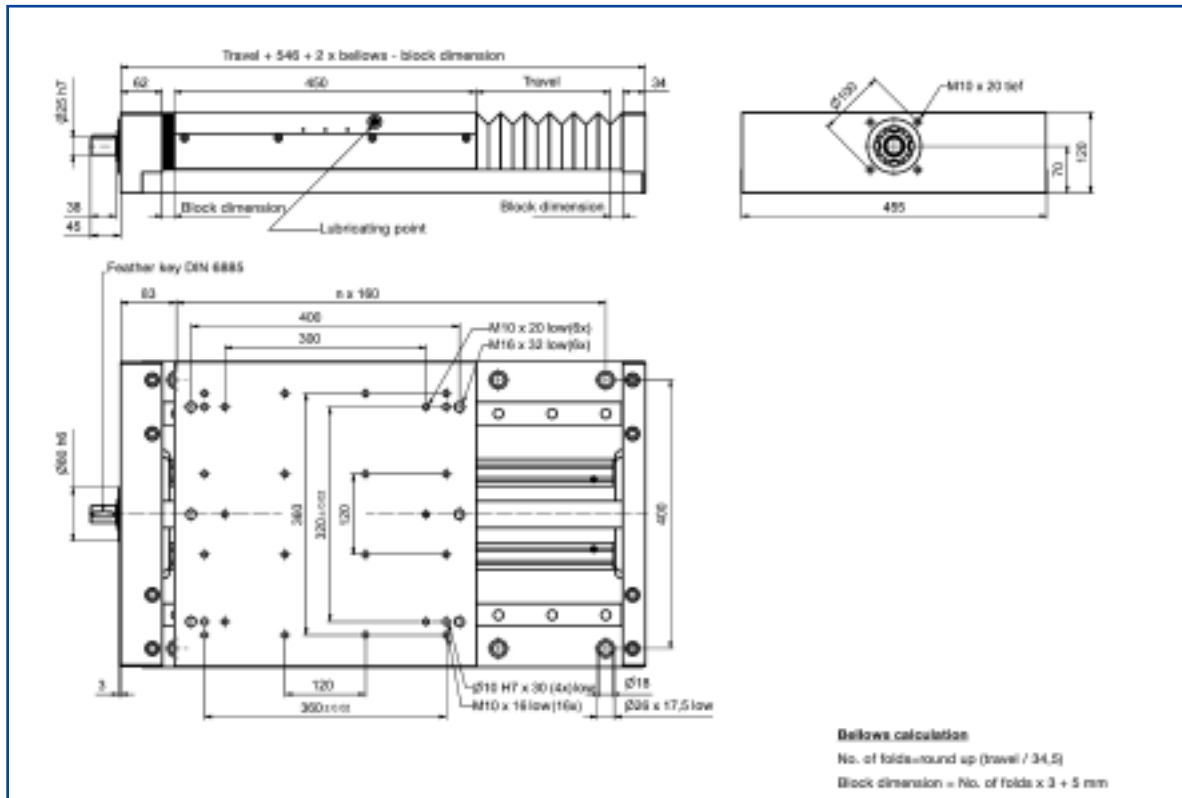
Subject to technical changes.

Linear tables



AXLT455

Linear table with screw-type drive and rail guide



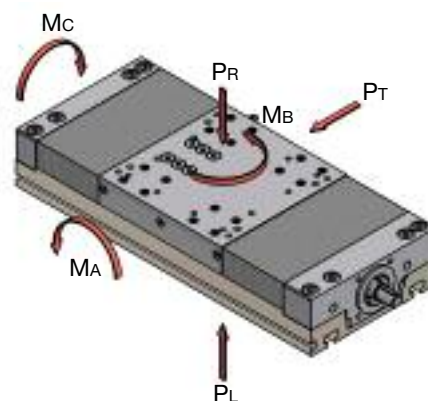
AXLT455

Linear table with screw-type drive and rail guide

Loads and load torques*

Rail guide H35		
Loads [N]	dyn.	stat
P_R	30000	77000
P_L	30000	77000
P_T	30000	77000
Load torques [Nm]		
M_A	3700	9500
M_B	3700	9500
M_C	3950	10000

* Max. permitted loads in accordance with definition on page 17.
See from page 9 onwards for load ratings for individual lifetime calculation.



Technical data

Movement speed	max. 2 m/s
Repeat accuracy	0,03 mm
Dyn. load rating ball screw	29,1 bis 54,3 kN ¹⁾
No-load torque	1,7 - 2,8 Nm
Moments of inertia:	
Lead 5 mm	15,64 kgcm ² /m
Lead 10 mm	13,55 kgcm ² /m
Lead 20 mm	13,52 kgcm ² /m
Lead 40 mm	13,42 kgcm ² /m
Max. overall length	3,2 m

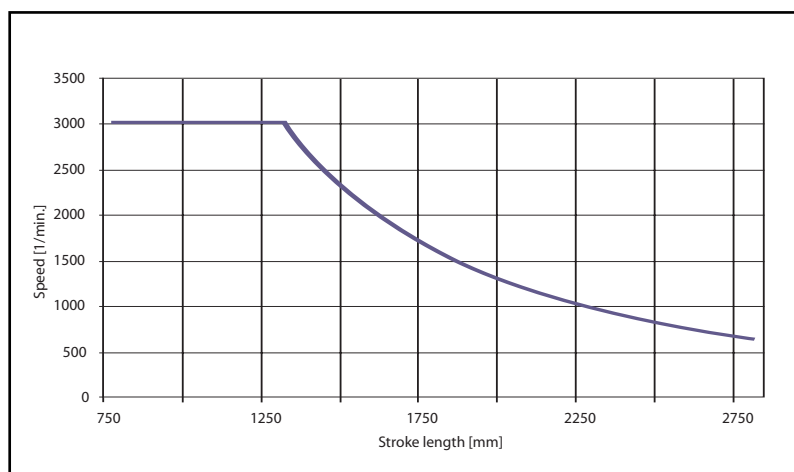
¹⁾ Depending on the design of the screw-type drive.

Drive elements

	Diameter	Lead
Ball screw	40 mm	5, 10, 20, 40 mm
Trapezoidal screw thread	40 mm	7 mm

Mass

Basic mass	74 kg
Mass per 100 mm stroke	6,3 kg
Sled mass	29 kg



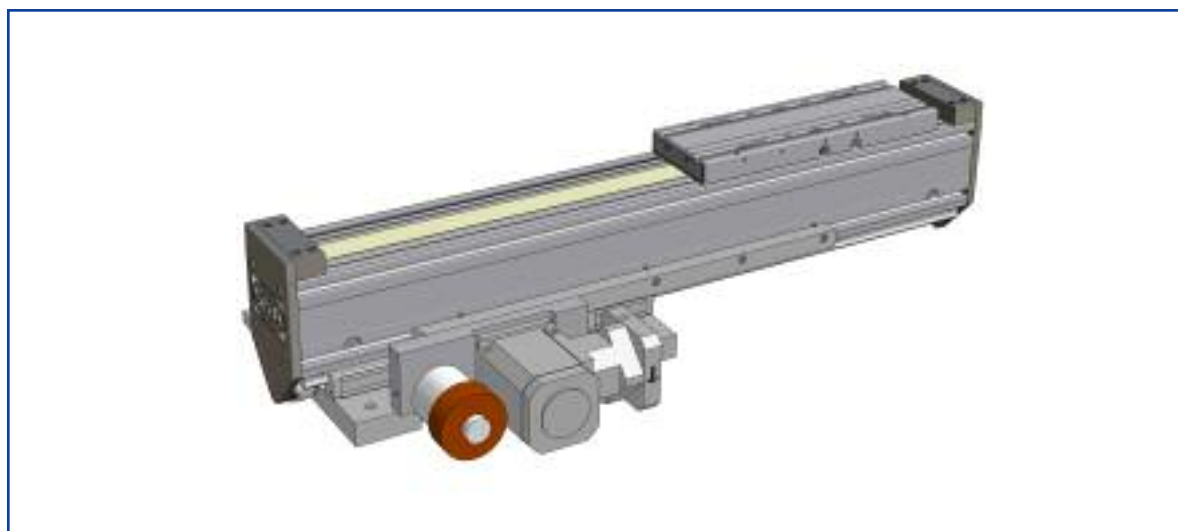
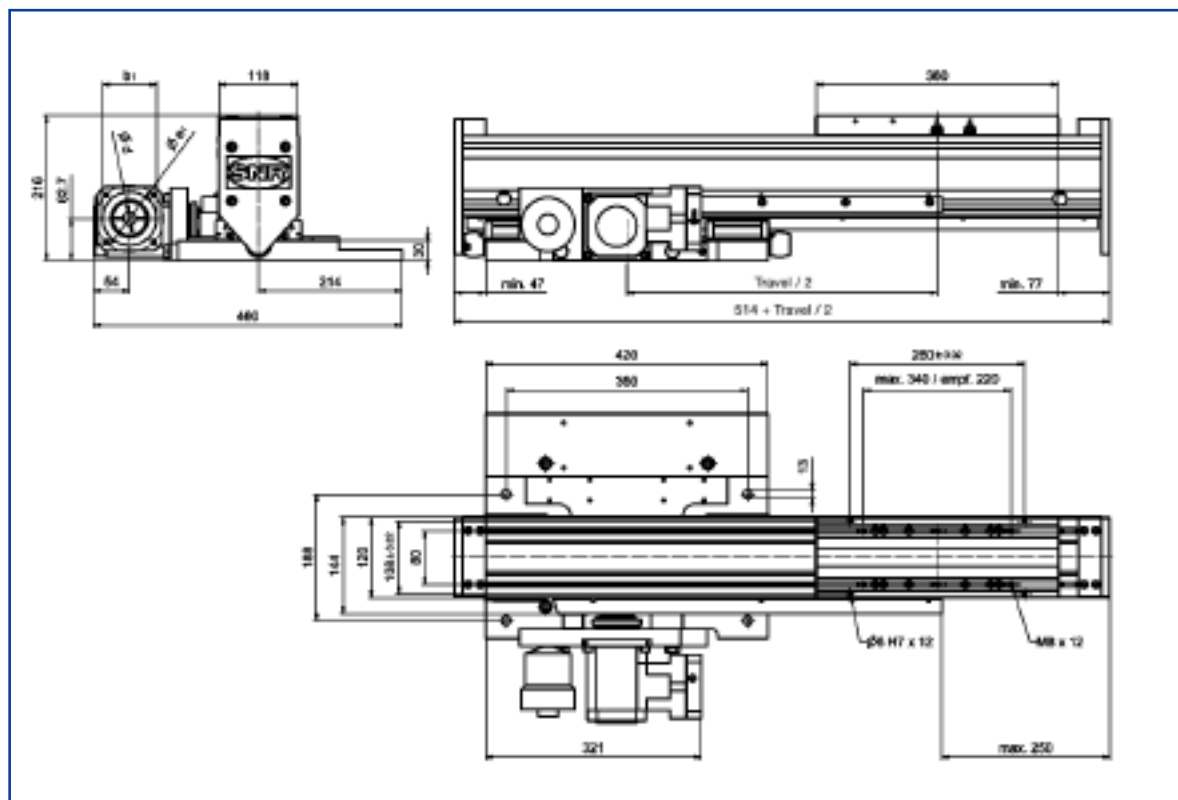
Subject to technical changes.

Telescopic axis



AXS120T-M

Telescopic axis with combined drive of toothed belt and rack

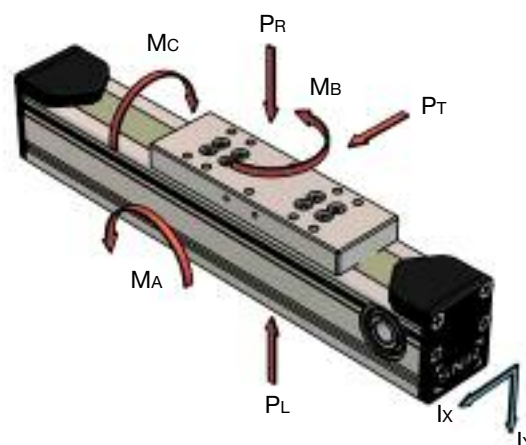


AXS120T-M

Telescopic axis with combined drive of toothed belt and rack

Loads and load torques*

Loads [N]	Rail guide			
	1. Guide level		2. Guide level	
	H25		W35	
	dyn.	stat.	dyn.	stat.
P_R	12200	41500	6900	19500
P_L	12200	41500	6900	19500
P_T	12200	41500	6900	19500
Load torques [Nm]				
M_A	1750	5900	580	1650
M_B	1750	5900	580	1650
M_C	470	1600	220	635



* Max. permitted loads in accordance with definition on page 17.
See from page 9 onwards for load ratings for individual lifetime calculation.

Technical data

	Horizontal fitting	Vertical fitting
Movement speed	max. 10 m/s	max. 3,6 m/s
Repeat accuracy	0,1 mm	0,1 mm
Drive elements:	Rack, module 2	Rack, modul 3
	Toothed belt 50 AT 10	Toothed belt 50 AT 10
Stroke per revolution (gearbox output side)	280 mm	500 mm
Permitted dyn. operating force		
of the belt:	2500 N	2500 N
of the rack:	2880 N	5860 N
Overall length	3 m	3 m
Geometrical moment of inertia I_x	661,1 cm ⁴	661,1 cm ⁴
Geometrical moment of inertia I_y	938,57 cm ⁴	938,57 cm ⁴

Mass

	Horizontal fitting		Vertical fitting	
		1 st level		1 st level
Basic mass	41,3 kg	14,5 kg	70 kg	15,4 kg
Mass per 100 mm stroke	3,9 kg	-	4,1 kg	-
Sled mass	5,9 kg	-	5,9 kg	-

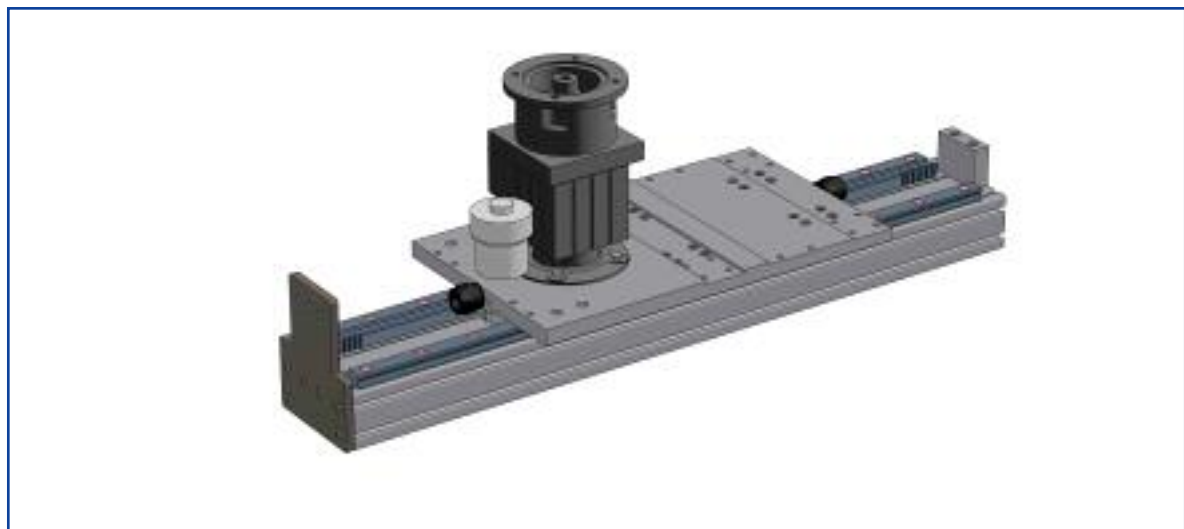
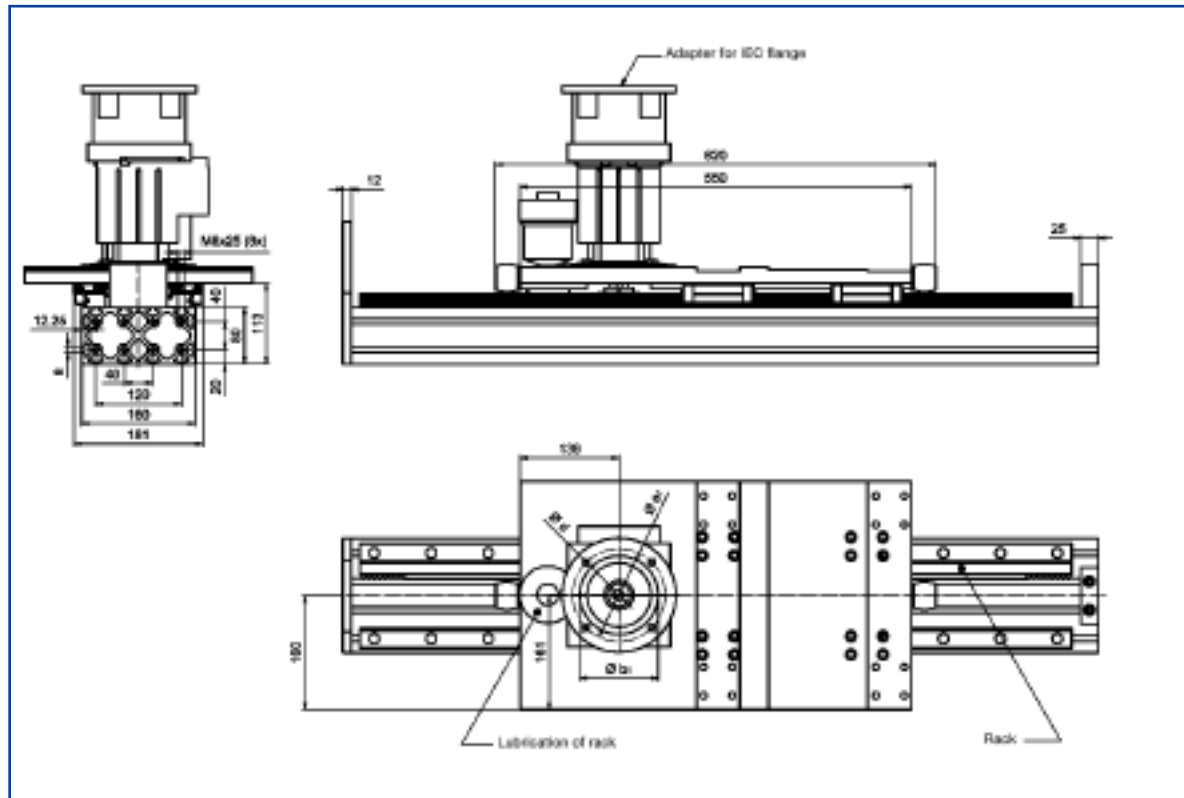
Subject to technical changes.

Lifting axes



AXS160-M160

Lifting axis with rack drive and rail guide



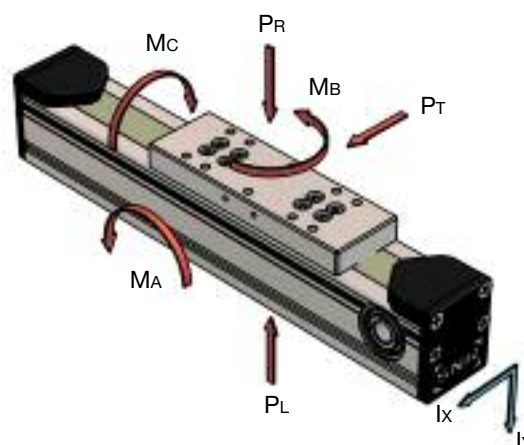
AXS160-M160

Lifting axis with rack drive and rail guide

Loads and load torques*

Rail guide G30		
Loads [N]	dyn.	stat
P_R	7300	20500
P_L	6800	20500
P_T	6100	16000
Load torques [Nm]		
M_A	690	1950
M_B	580	1500
M_C	380	1050

* Max. permitted loads in accordance with definition on page 17.
See from page 9 onwards for load ratings for individual lifetime calculation.



Technical data

Movement speed	max. 3 m/s
Repeat accuracy	0,05 mm
Drive elements	rack division 8 mm
Stroke per revolution:	160 mm
Permitted dyn. operating force	2860 N
Overall length	6 m
Geometrical moment of inertia I_x	1890 cm ⁴
Geometrical moment of inertia I_y	880 cm ⁴

Mass*

Basic mass	41,3 kg
Mass per 100 mm stroke	3,9 kg
Sled mass	5,9 kg

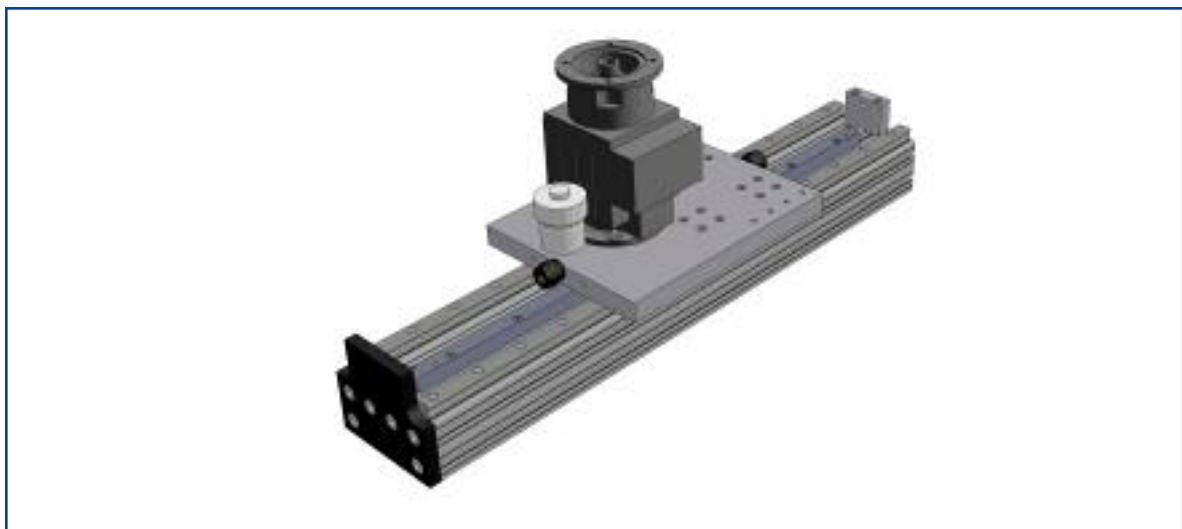
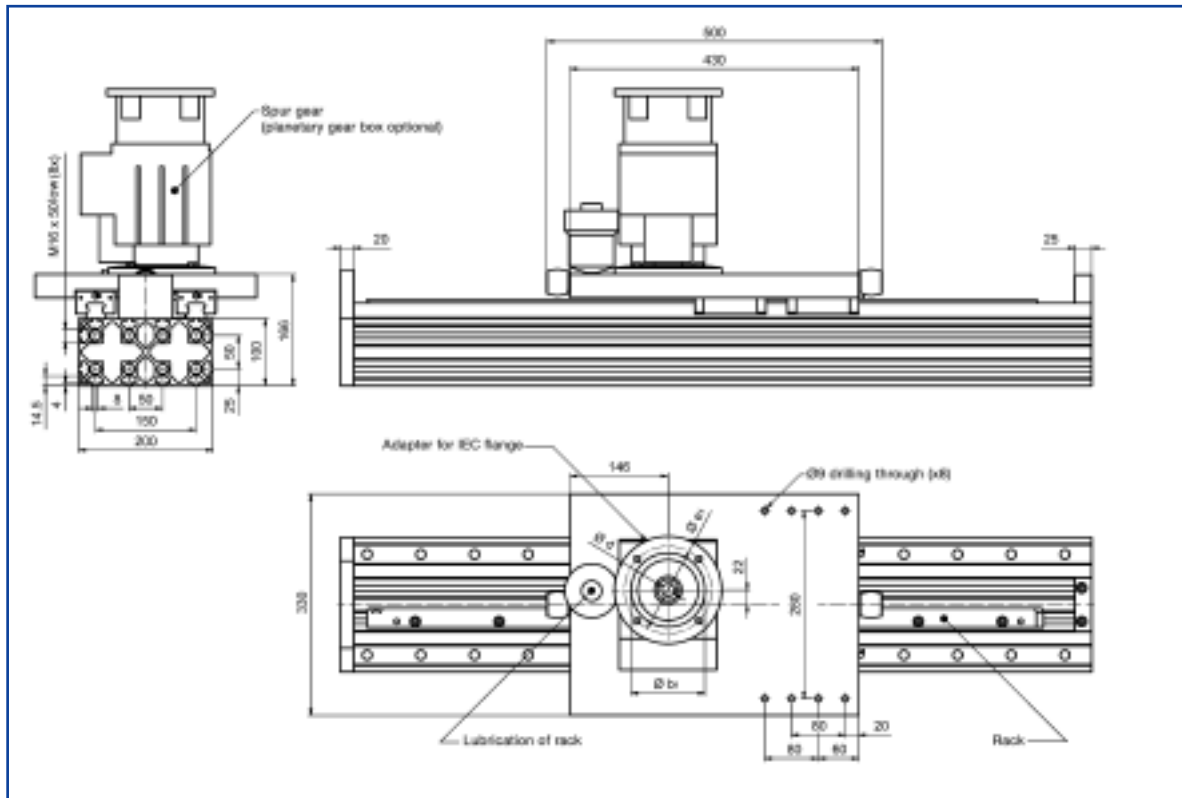
* Masses without gearbox

Lifting axes



AXS200-M200

Lifting axis with rack drive and rail guide



AXS200-M200

Lifting axis with rack drive and rail guide

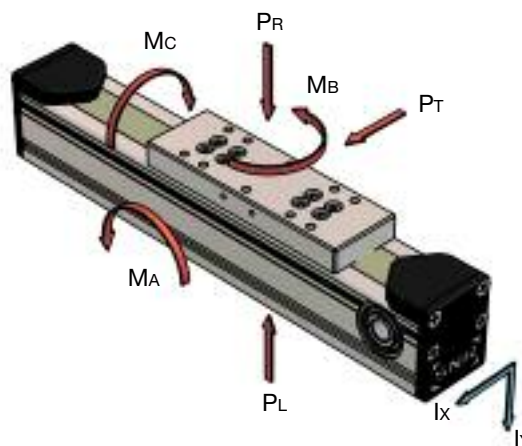
Loads and load torques*

Loads [N]	Rail guide			
	H30		H30*	
	dyn.	stat	dyn.	stat
P_R	17400	53000	17400	53000
P_L	17400	53000	17400	53000
P_T	17400	53000	17400	53000
Load torques [Nm]				
M_A	1100	3400	2200	6700
M_B	1100	3400	2200	6700
M_C	1200	3700	1200	3700

*Only valid with mounting as complete system with AXS 280-Z.

* Max. permitted loads in accordance with definition on page 17.

See from page 9 onwards for load ratings for individual lifetime calculation.



Technical data

Movement speed	max. 3,4 m/s
Repeat accuracy	0,05 mm
Drive elements	Rack, module 3
Stroke per revolution:	200 mm
Permitted dyn. operating force	6130 N
Overall length	6 m
Geometrical moment of inertia I_x	3500 cm ⁴
Geometrical moment of inertia I_y	1100 cm ⁴

Mass*

Basic mass	35,0 kg
Mass per 100 mm stroke	3,5 kg
Sled mass	17,0 kg

*Masses without gearbox

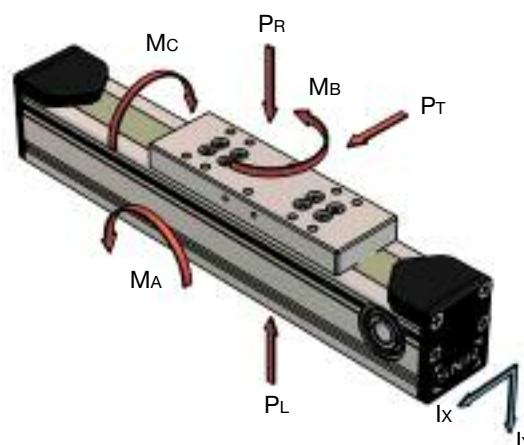
AXS200-M250

Lifting axis with rack drive and rail guide

Loads and load torques*

Rail guide H30		
Loads [N]	dyn.	stat
P_R	21000	70000
P_L	21000	70000
P_T	21000	70000
Load torques [Nm]		
M_A	2250	7700
M_B	2250	7700
M_C	1450	4900

* Max. permitted loads in accordance with definition on page 17.
See from page 9 onwards for load ratings for individual lifetime calculation.



Technical data

Movement speed	max. 1,8 m/s
Repeat accuracy	0,05 mm
Drive elements	rack, module 3
Stroke per revolution:	250 mm
Permitted dyn. operating force	6130 N
Overall length	6 m
Geometrical moment of inertia I_x	3500 cm ⁴
Geometrical moment of inertia I_y	1100 cm ⁴

Mass*

Basic mass	39,5 kg
Mass per 100 mm stroke	3,5 kg
Sled mass	23,0 kg

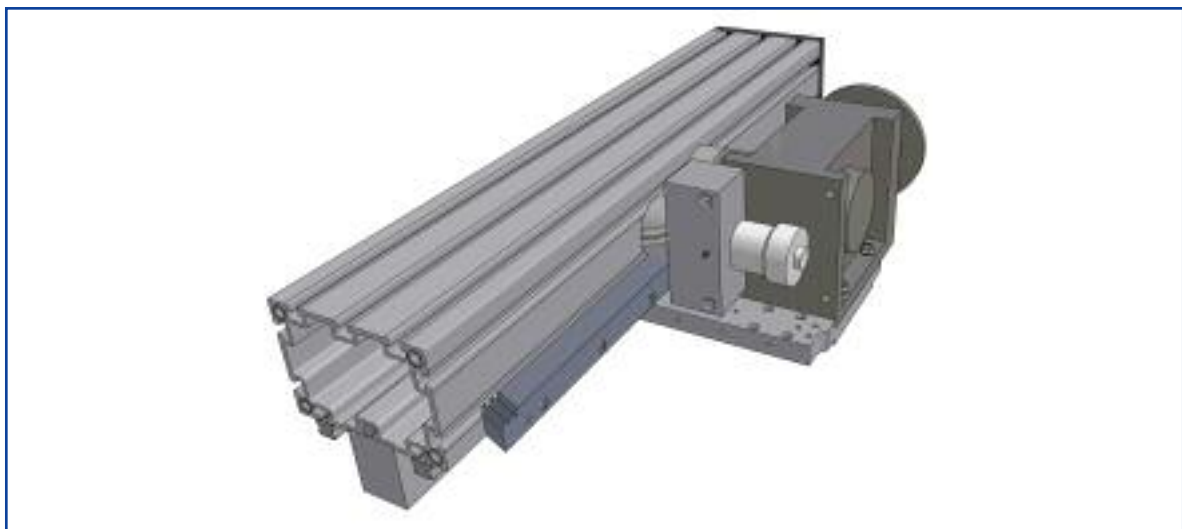
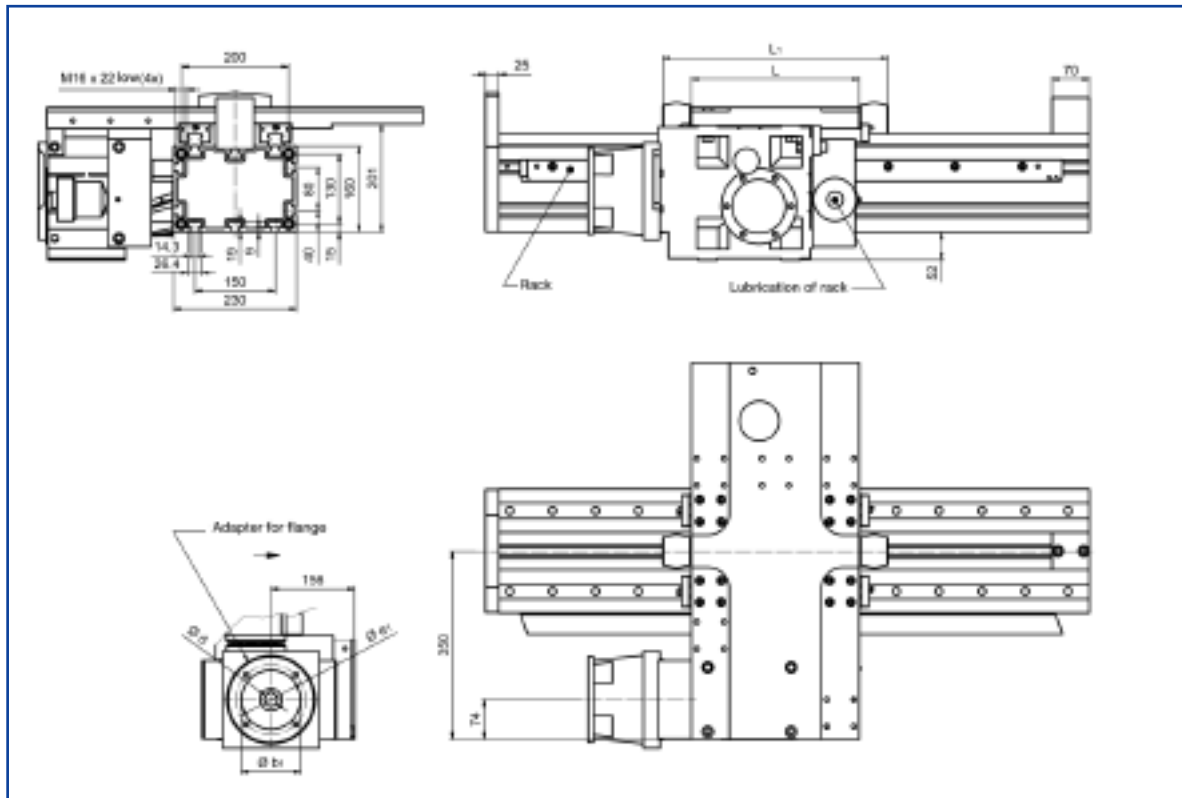
* Masses without gearbox

Lifting axes



AXS230-M320

Lifting axis with rack drive and rail guide



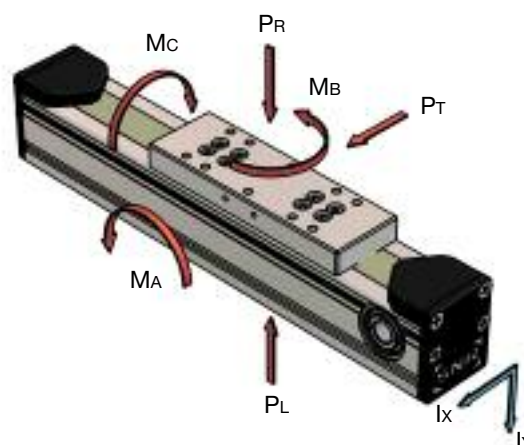
AXS230-M320

Lifting axis with rack drive and rail guide

Loads and load torques*

Rail guide H30		
Loads [N]	dyn.	stat
P_R	17400	53000
P_L	17400	53000
P_T	17400	53000
Load torques [Nm]		
M_A	1850	5700
M_B	1850	5700
M_C	1200	3700

* Max. permitted loads in accordance with definition on page 17.
See from page 9 onwards for load ratings for individual lifetime calculation.



Technical data

Movement speed	max. 2,5 m/s
Repeat accuracy	0,05 mm
Drive elements	rack, module 4
Stroke per revolution:	320 mm
Permitted dyn. operating force	10750 N
Overall length	10 m
Geometrical moment of inertia I_x	8850 cm ⁴
Geometrical moment of inertia I_y	6780 cm ⁴

Mass*

Basic mass	56,0 kg
Mass per 100 mm stroke	4,4 kg
Sled mass	30,5 kg

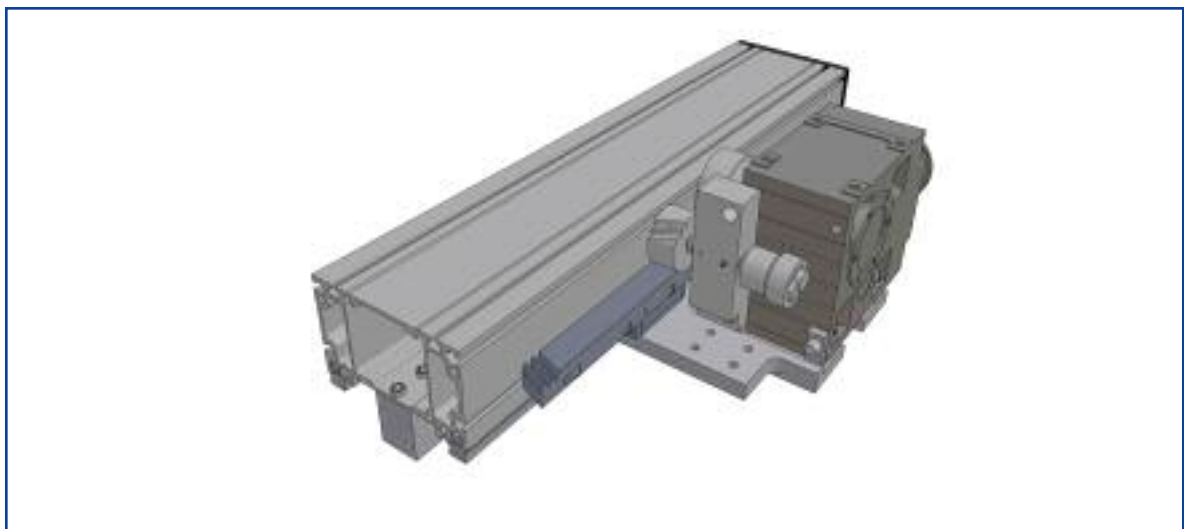
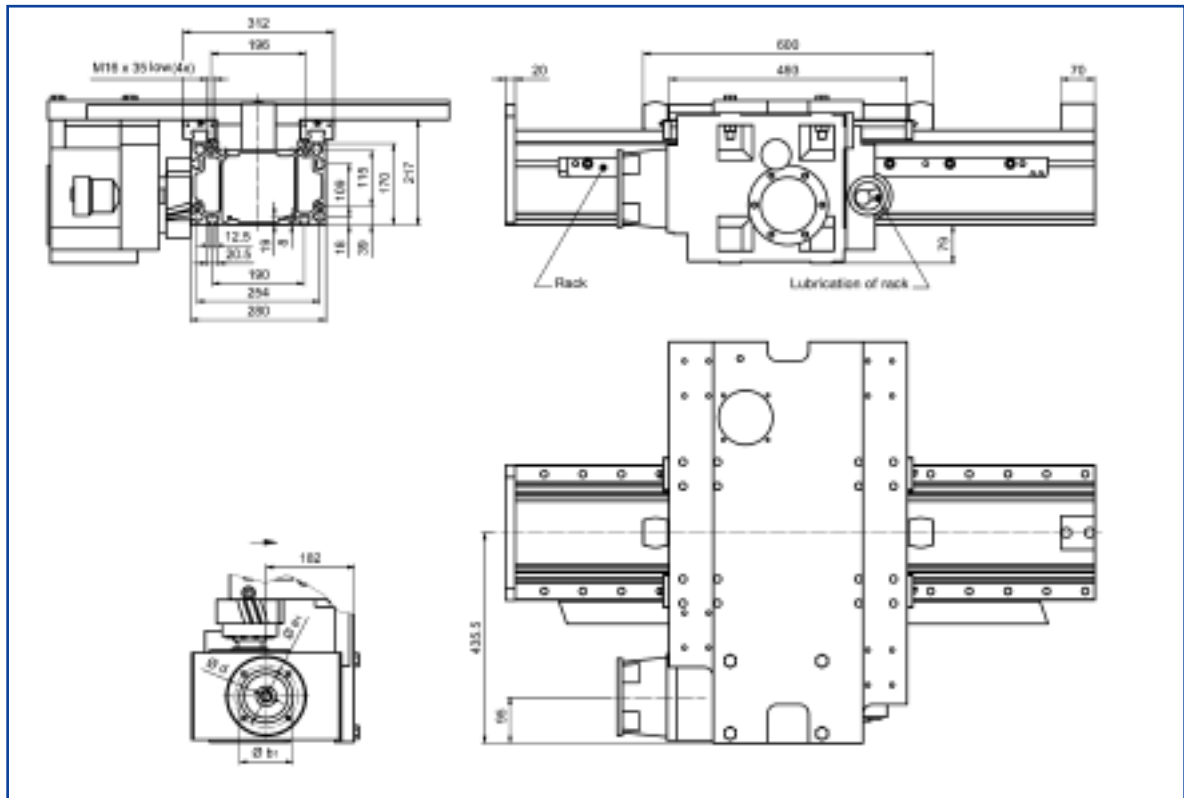
* Masses without gearbox

Lifting axes



AXS280-M400

Lifting axis with rack drive and rail guide



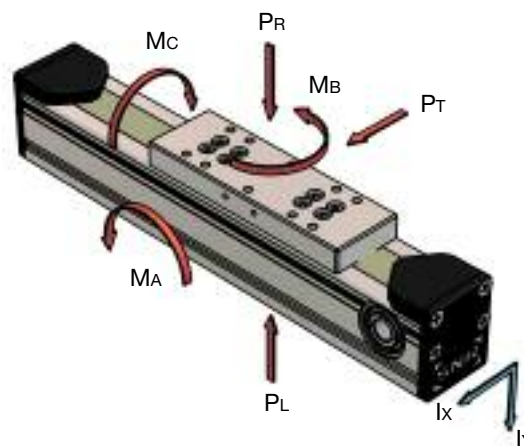
AXS280-M400

Lifting axis with rack drive and rail guide

Loads and load torques*

Rail guide H35		
Loads [N]	dyn.	stat
P_R	28000	100000
P_L	28000	100000
P_T	28000	100000
Load torques [Nm]		
M_A	4300	15500
M_B	4300	15500
M_C	3000	10500

* Max. permitted loads in accordance with definition on page 17.
See from page 9 onwards for load ratings for individual lifetime calculation.



Technical data

Movement speed	max. 3,3 m/s
Repeat accuracy	0,05 mm
Drive elements	rack, module 5
Stroke per revolution:	400 mm
Permitted dyn. operating force	16240 N
Overall length	10 m
Geometrical moment of inertia I_x	14645 cm ⁴
Geometrical moment of inertia I_y	7958 cm ⁴

Mass*

Basic mass	96,0 kg
Mass per 100 mm stroke	5,9 kg
Sled mass	54,5 kg

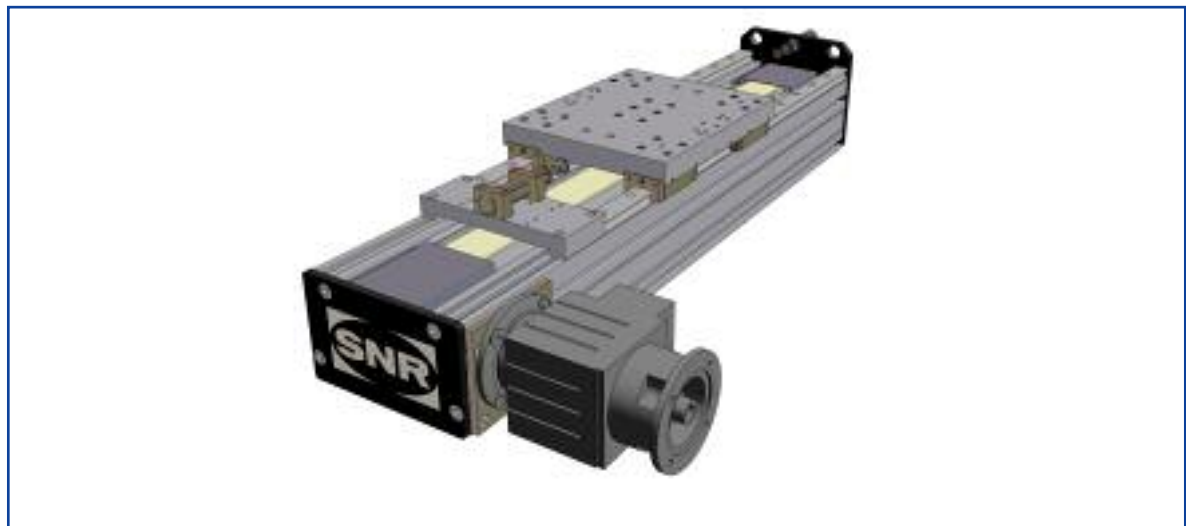
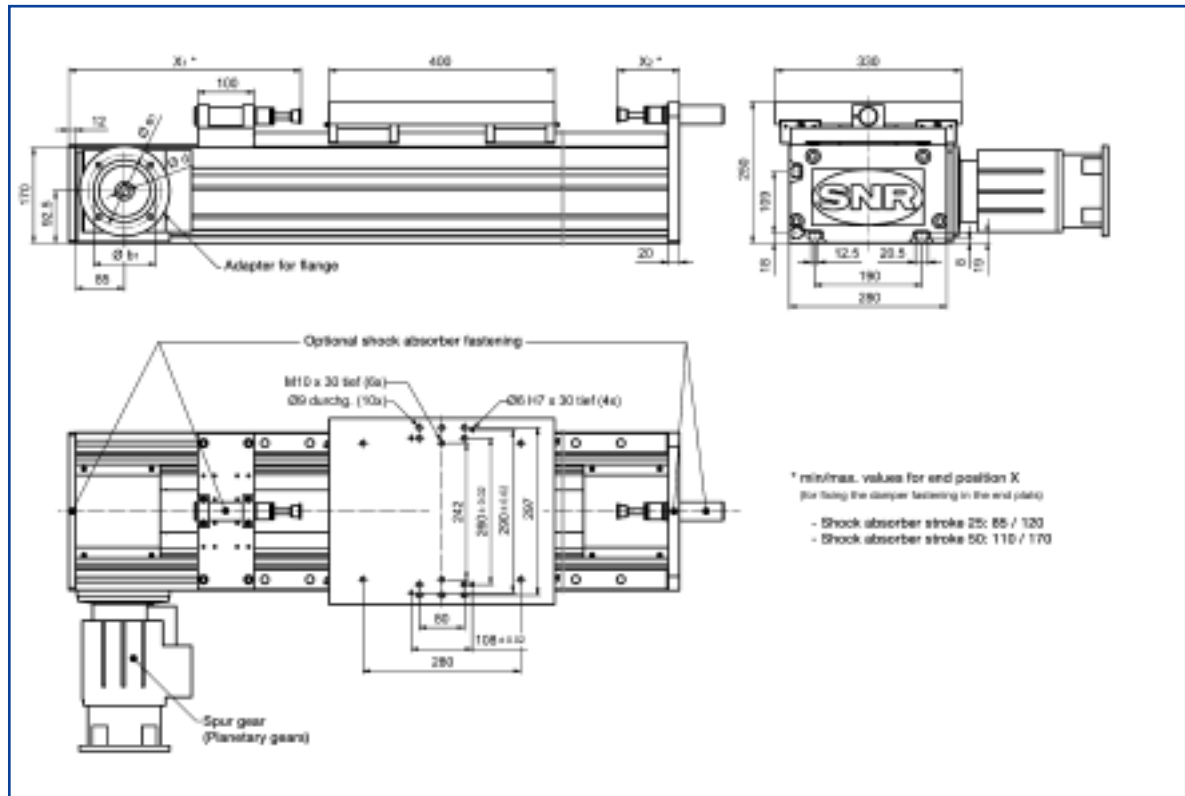
* Masses without gearbox

Gantry axes



AXS280-Z

Gantry axis with toothed belt drive and rail guide



AXS280-Z

Gantry axis with toothed belt drive and rail guide

Loads and load torques*

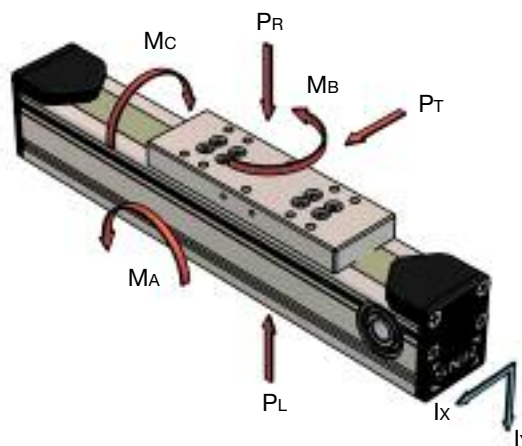
Loads [N]	Rail guide S30		Rail guide H30		Rail guide S35		Rail guide H35	
	dyn.	stat.	dyn.	stat.	dyn.	stat.	dyn.	stat.
P_R	18000	42000	17400	53000	25000	57000	24000	77000
P_L	11000	21000	17400	53000	15300	28500	24000	77000
P_T	9900	18000	17400	53000	13800	24500	24000	77000
Load torques [Nm]								
M_A	1750	3400	2100	6500	2450	4600	2950	9400
M_B	1200	2200	2100	6500	1650	3000	2950	9400
M_C	1150	2200	1850	5700	1600	3000	2600	8300

* Max. permitted loads in accordance with definition on page 17. See from page 9 onwards for load ratings for individual lifetime calculation.

Technical data

Movement speed	max. 6 m/s
Repeat accuracy	0,05 mm
Drive elements	Toothed belt 75 AT10
Stroke per revolution:	4000 N
Permitted dyn. operating force	480 mm
No-load torque	9 Nm
Moment of inertia	227,6 kgcm ²
Overall length	10 m (one-piece) ¹⁾
Geometrical moment of inertia I_x	14.645 cm ⁴
Geometrical moment of inertia I_y	7.958 cm ⁴

¹⁾ Greater length on request



Mass

Rail guide	Rail guide S/H 30	Rail guide S/H 35
Basic mass	73 kg	78 kg
Mass per 100 mm stroke	4,3 kg	4,6 kg
Sled mass	19 kg	19 kg

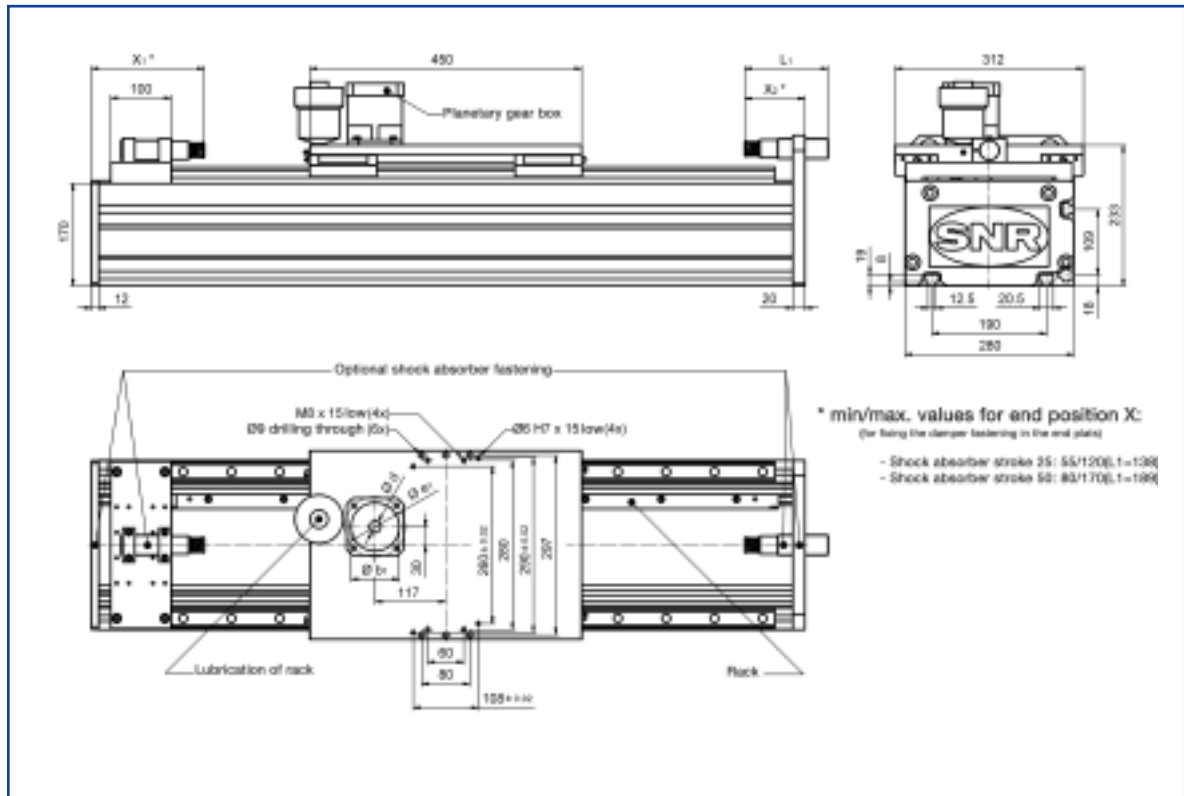
Subject to technical changes.

Gantry axes



AXS280-M200

Gantry axis with rack drive and rail guide



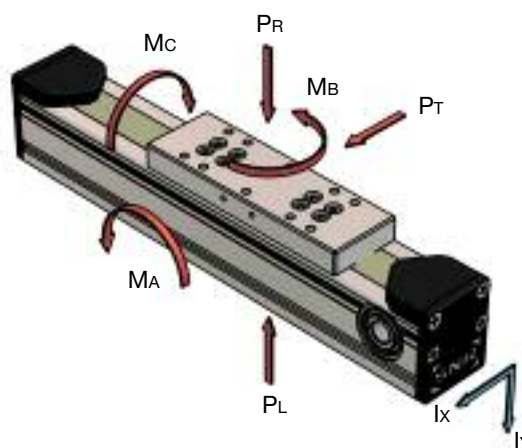
AXS280-M200

Gantry axis with rack drive and rail guide

Loads and load torques*

Loads [N]	Rail guide			
	S35		H35	
	dyn.	stat	dyn.	stat
P_R	25000	57000	24000	77000
P_L	15300	28500	24000	77000
P_T	13800	24500	24000	77000
Load torques [Nm]				
M_A	3100	5800	3500	11200
M_B	2000	3500	3500	11200
M_C	1600	3000	2600	8300

* Max. permitted loads in accordance with definition on page 17.
See from page 9 onwards for load ratings for individual lifetime calculation.



Technical data

Movement speed	max. 3,3 m/s
Repeat accuracy	0,05 mm
Drive elements	rack, module 2
Stroke per revolution:	200 mm
Permitted dyn. operating force	3190 N
Overall length	10 m ¹⁾
Geometrical moment of inertia I_x	14645 cm ⁴
Geometrical moment of inertia I_y	7958 cm ⁴

¹⁾ Greater length on request.

Mass*

Basic mass	52,0 kg
Mass per 100 mm stroke	4,9 kg
Sled mass	16,5 kg

* Masses without gearbox

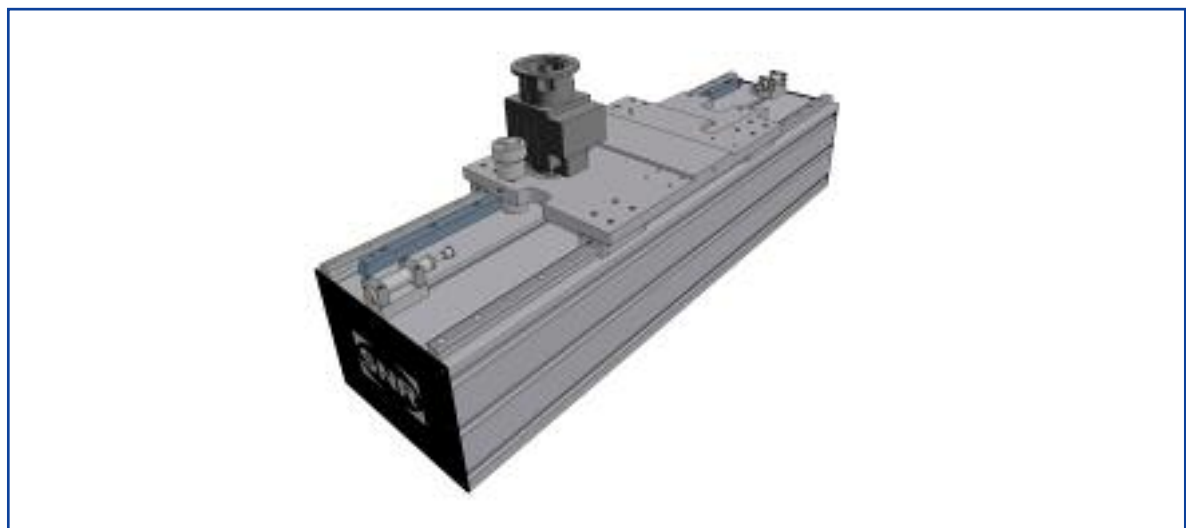
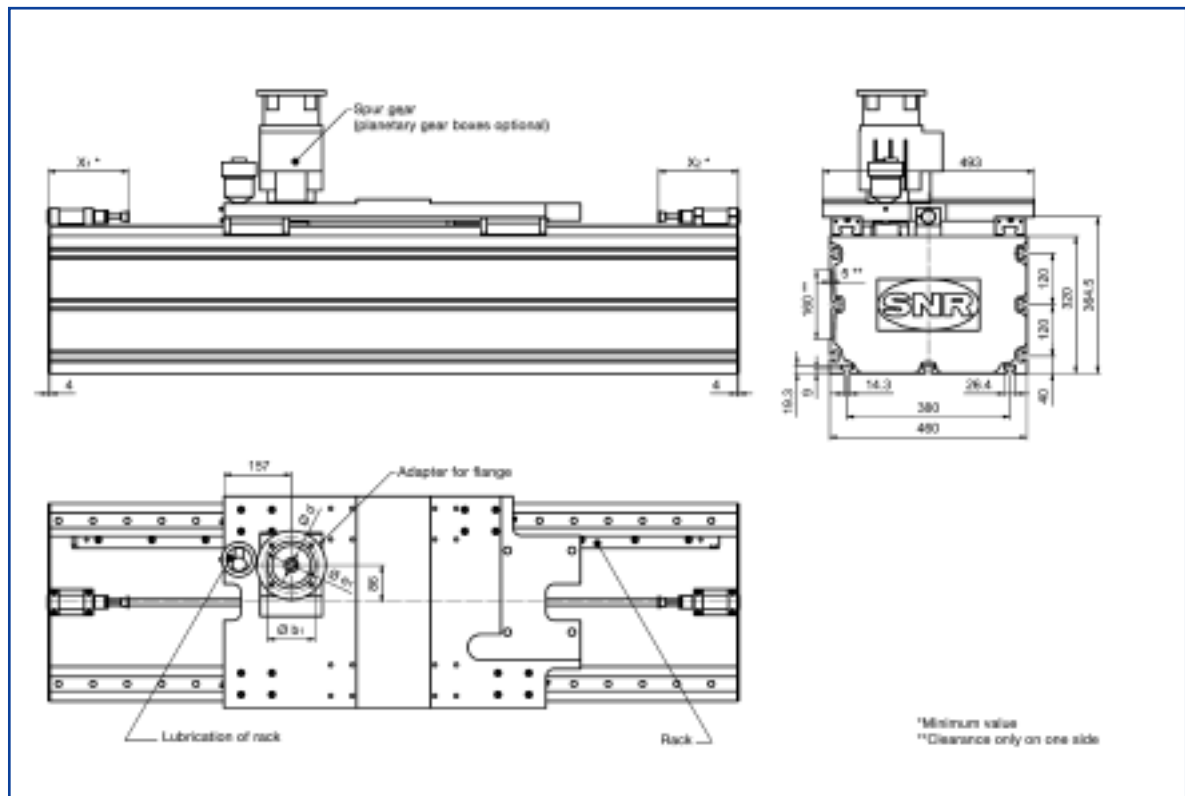
Subject to technical changes.

Gantry axes



AXS460-M250

Gantry axis with rack drive and rail guide



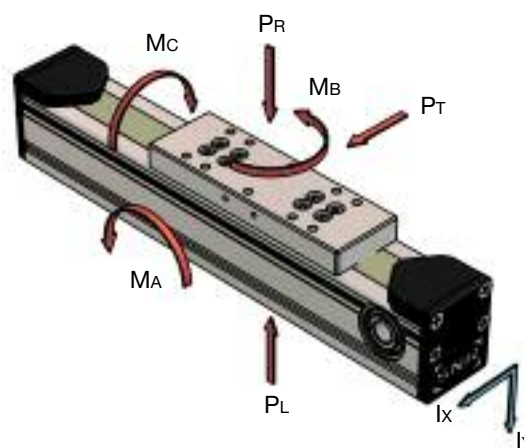
AXS460-M250

Gantry axis with rack drive and rail guide

Loads and load torques*

Rail guide H35		
Loads [N]	dyn.	stat
P_R	28000	100000
P_L	28000	100000
P_T	28000	100000
Load torques [Nm]		
M_A	5800	21000
M_B	5800	21000
M_C	4500	16000

* Max. permitted loads in accordance with definition on page 17.
See from page 9 onwards for load ratings for individual lifetime calculation.



Technical data

Movement speed	max. 6 m/s
Repeat accuracy	0,05 mm
Drive elements	rack, module 3
Stroke per revolution:	250 mm
Permitted dyn. operating force	5860 N
Overall length	10 m ¹⁾
Geometrical moment of inertia I_x	88490 cm ⁴
Geometrical moment of inertia I_y	54170 cm ⁴

¹⁾ Greater length on request.

Mass*

Basic mass	139,5 kg
Mass per 100 mm stroke	8,9 kg
Sled mass	46,5 kg

* Masses without gearbox

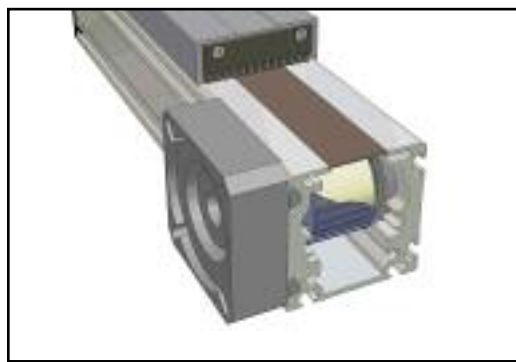
Subject to technical changes.



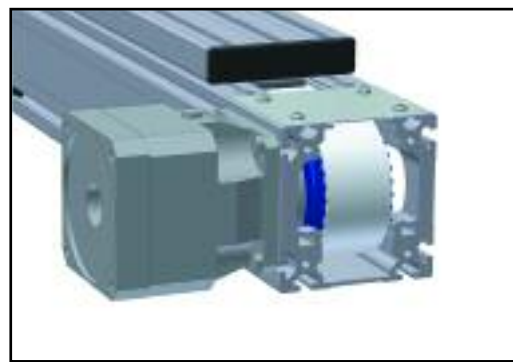
Integrated planetary gears

To meet the highest demands in terms of accuracy and dynamics, our AXC line with integrated planetary gears is available. In the 60 size, the planetary gear is integrated directly in the belt pulley of the toothed belt drive. In the 80 and 120 sizes, a belt pulley mounted on the output shaft of the gear ensures torque transmission free from backlash actuated by adherence. Direct assembly removes the need for a coupling box and coupling, giving our linear axes extremely compact dimensions.

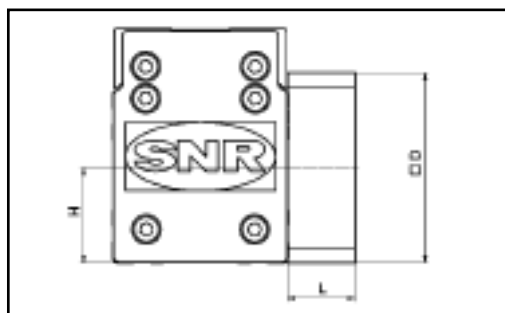
With particularly high positioning demands, the gears in sizes AXC80 and AXC120 are available with a reduced circumferential backlash of 3 or 5 angular minutes.



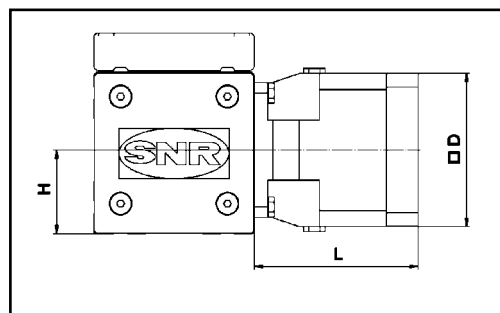
AXC 60



AXC40, 80 and 120



AXC60



AXC40, 80 and 120

		AXC40		AXC60	
Multiplication	Single stage	5	10	4	9
	Two stage	25; 50	100	20; 40	
Rated output torque [Nm]		6	5,5	6	5,5
Accelerated output torque [Nm] ¹⁾		12	11	12	11
Rated input speed [min ⁻¹]		4000		4000	
Max. input speed [min ⁻¹]		8000		8000	
Circumferential backlash [arcmin]	Single stage	12		6	
	Two stage	15		9	
Mass moment of inertia [kgcm ²]	Single stage	0,06		0,06	
	Two stage	0,052		0,09	
Mass [kg]	Single stage	0,75		0,45	
	Two stage	0,92		0,62	
Shaft height H [mm]		24,9		32,5	
Flange diameter D [mm]		55	70	65	85
Reference circle e1 [mm]		55-63	63-75	63 - 75	85 - 100
Motor shaft d (max.) [mm]		11	14	11	14
Overall length L [mm]	Single stage	74	79	23,5	29,5
	Two stage	90	95	43	50

¹⁾ Note permissible operating load of the linear axis!

		AXC80				AXC120				
Multiplication	Single stage	3	4; 5; 7	10	3	4; 5; 7	10			
	Two stage		12; 16; 20; 28; 35; 50; 70	100		12; 16; 20; 28; 35; 50; 70	100			
Rated output torque [Nm]		56	70	45	135	170	110			
Accelerated output torque [Nm] ¹⁾		80	100	80	200	250	200			
Rated input speed [min ⁻¹]		2300	2900-4500	3100	2000	2500-4200	2500			
Max. input speed [min ⁻¹]		6000				4800				
Circumferential backlash [arcmin]	Single stage	6 (reduced 3)				6 (reduced 3)				
	Two stage	8 (reduced 5)				8 (reduced 5)				
Mass moment of inertia [kgcm ²]	Single stage	0,34 - 0,94				1,15 - 3,75				
	Two stage	0,11 - 0,48				0,33 - 1,79				
Mass [kg]	Single stage	3,8				7,8				
	Two stage	4,2				8,3				
Shaft height H [mm]		43,5				62,5				
Flange diameter D [mm]	Single stage	95	115	130	140	125	125	130	140	200
	Two stage	75				95	115			
Reference circle e1 [mm]		70-100	115	130	165	70-100	115	130	165	215
Motor shaft d (max.) [mm]		14	19	24		19	24	32		
Overall length L [mm]	Single stage	110	110	120		119	119	129		
	Two stage	122	137	147		136	240	162		

¹⁾ Note permissible operating load of the linear axis!

AXC/AXLT drive adaptation



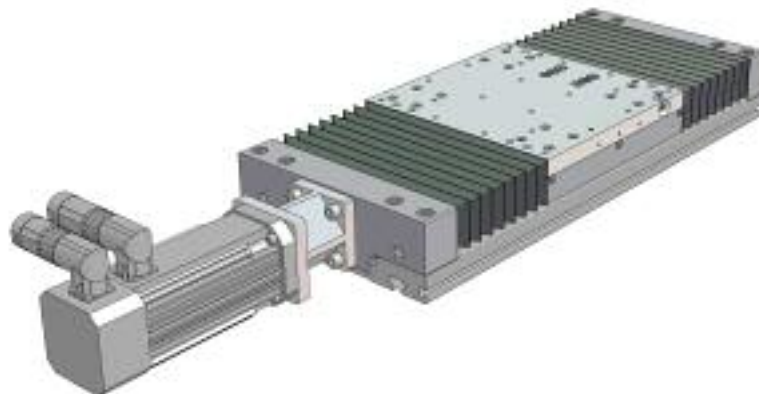
Coupling box for screw-type drive

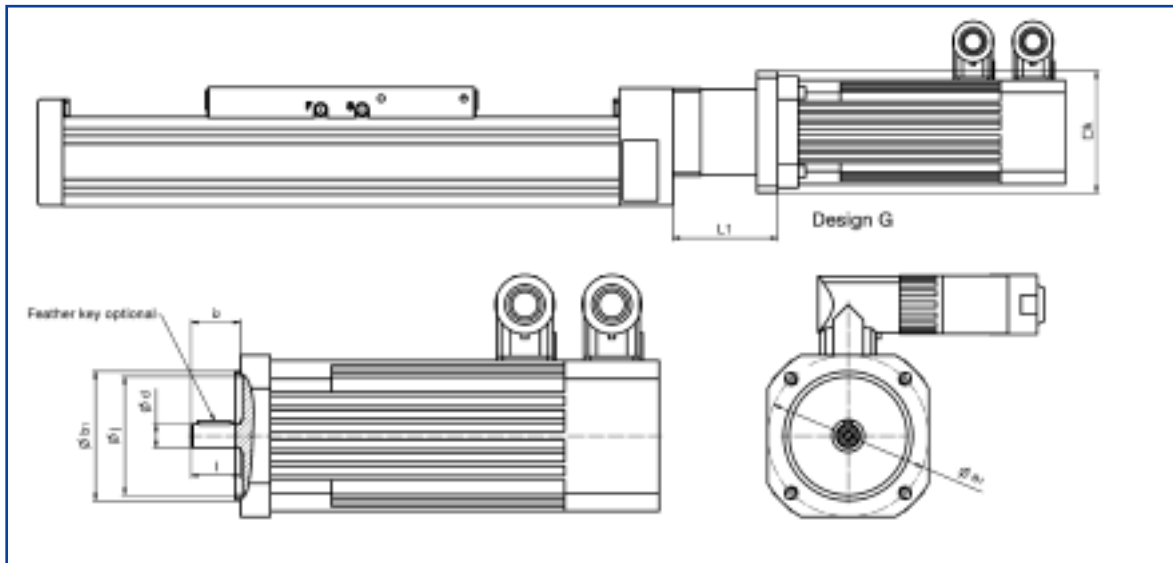
The drives are directly connected via a coupling with the journal of the screw-type drive. The drive is fixed via a separate coupling box.

AXC40 – 120 drive adaptation



AXLT155-455 drive adaptation





Linear axis	Motor design	e1 min.	e1 max.	b1 min.	b1 max.	j	d min.	d max.	i2 max.	i2-l max.	k	L1	Torque
AXC40-S	B5 / B14	45	63	35*	50	-	5	14	30	7	55	47	7,5 Nm
AXC60-S	B5 (B14)	63 (75)	100	50*	80	-	9	19**	40	3	82	71	10 Nm
	B5	115	130	95	95	-	19	20	40	15	110	84	10 Nm
	B5	130	130	110	110	-	24	24	50	25	120	93	10 Nm
AXC80-S	B5 / B14	63	100	50	80	> 40	9	19**	40	0	82	73	17 Nm
	B5	115	130	95	95	> 40	19	20	40	15	110	88	17 Nm
	B5	130	130	110	110	-	24	24	50	25	120	98	17 Nm
AXC120-S	B5 / B14	75	130	60*	110	-	14	24**	50	3	112	89	60 Nm
AXLT155	B5 / B14	55	100	34*	80	-	5	14	30	7	85	71	10 Nm
AXLT225	B5 / B14	63	100	50	80	> 40	9	19**	40	0	82	73	17 Nm
	B5	115	130	95	95	-	19	20	40	15	110	88	17 Nm
	B5	130	130	110	110	-	24	24	50	25	120	98	17 Nm
AXLT325	B5 / B14	75	130	60*	110	-	14	24**	50	3	112	89	60 Nm
AXLT455	B5 / B14	100	165	80*	130	-	19	25	50	8	140	105	160 Nm
	B5 / B14	130	165	110	130	-	28	32	60	23	155	120	160 Nm
	B5 / B14	215	215	180	180	-	38	38	80	45	192	142	160 Nm

* Motors with smaller centring can also be used. Centring then takes place via the coupling.

** For motors with feather key with maximum shaft length a shorter feather key will be supplied for exchange.

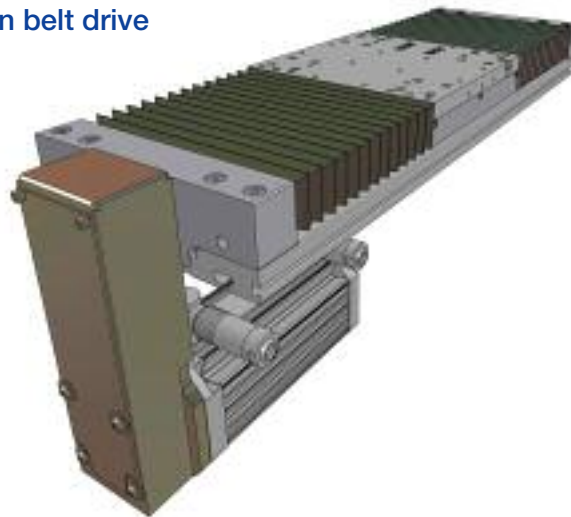
AXC/AXLT drive adaptation



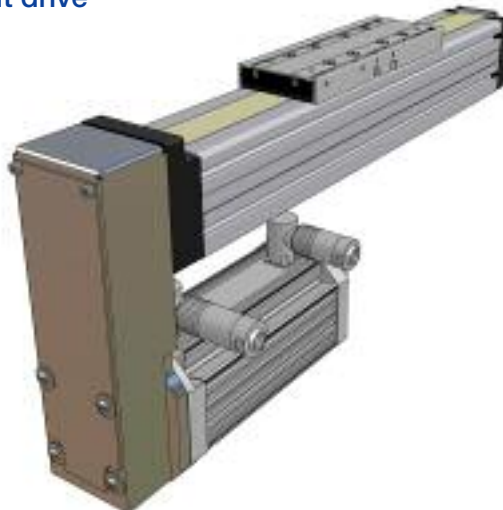
Deflection belt drive for screw-type drive

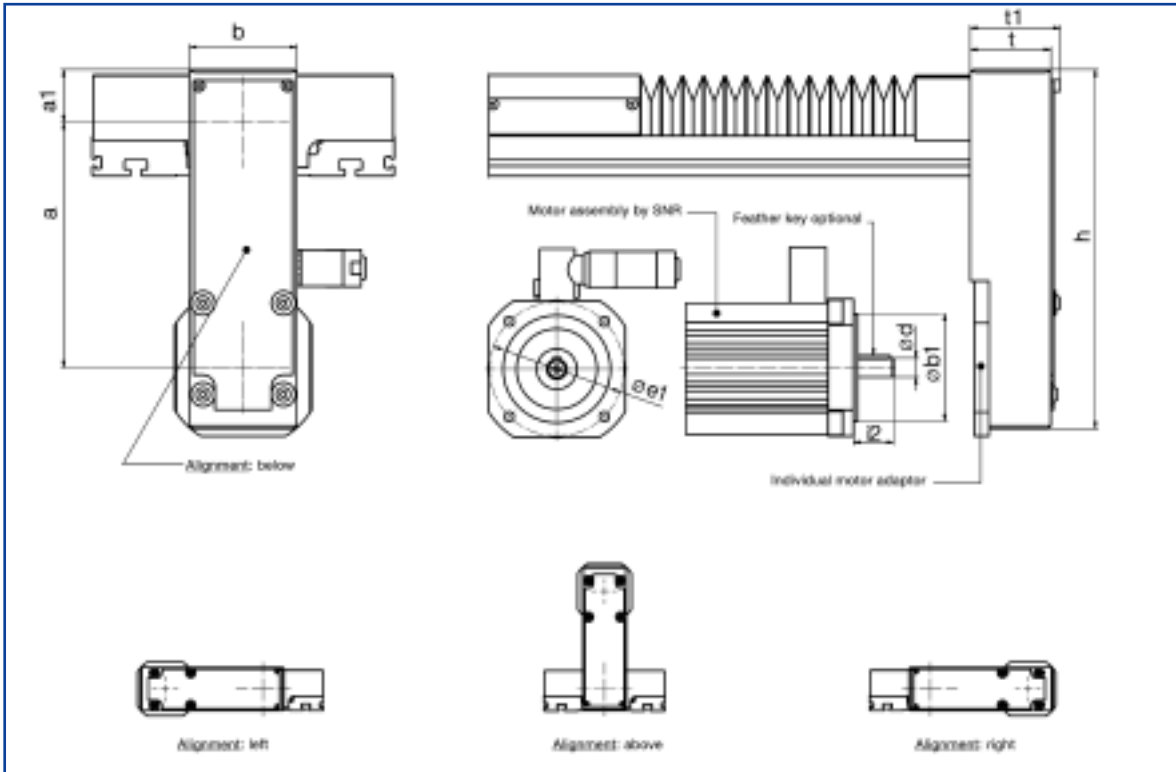
In order also to be able to optimally utilise the available room in tight spaces, we also offer deflection belt drives for the linear axes with screw-type drive as well as for the linear tables. This makes it possible to adjust the installation position of the drive to suit the environmental conditions.

AXLT with deflection belt drive



AXC with deflection belt drive





Linear axis	Available ratios with the relevant maximum possible motor shaft diameters (Ø d) for the following fixing variants: Clamping set / feather key / adhesive joint													
AXC60 / AXLT155	1			1,5			1,8			2,25				
	14	-	-	-	14	14	-	11	14	-	9	9		
AXC80 / AXLT225	1			1,25			1,5			2			2,5	
	16	24	24	14	19	19	10	16	16	-	12	12	- 9 9	
AXC120 / AXLT325	1			1,2			1,5			2			2,4	3
	24	-	-	19	24	24	14	24	24	9	19	19	- 14 19 - 9 14	
AXLT455	1			1,25			1,6			2				
	28	-	-	28	-	-	28	-	-	19	28	28		
Linear axis	Motor limiting dimensions (min/max)							Dimensions						
	Ø b1		Ø e1		i2		Design	a	a1	b	h	t	t1	
AXC60	50*	60	63	75	20	30	B5	106 ± 6	35	60	197	40	45	
AXLT155	50*	60	63	75	20	30	B5	140,5 ± 2	31,5	60	216	40	45	
AXC80 / AXLT225	50*	80	63	100	20	50	B5	185 ± 2,5	39	80	267	60	67	
AXC120 / AXLT325	60*	110	75	130	30	50	B5 / B14	249,5 ± 5,5	57	100	407	60	67	
AXLT455	80*	130	100	165	30	60	B5 / B14	354 ± 5	89	180	565	80	89	

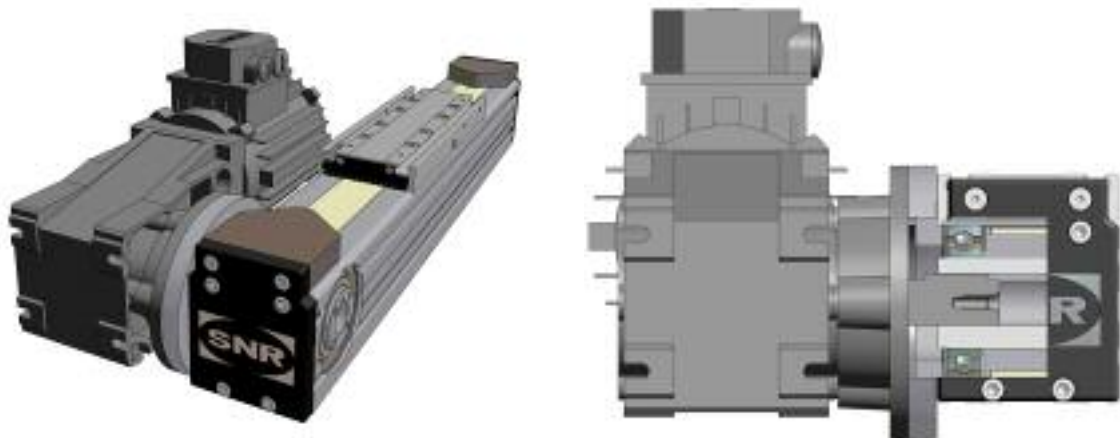
* Motors with smaller centring (Ø b1) can also be used. Centring via the motor adapter is not required in this case.

AXC/AXLT drive adaptation

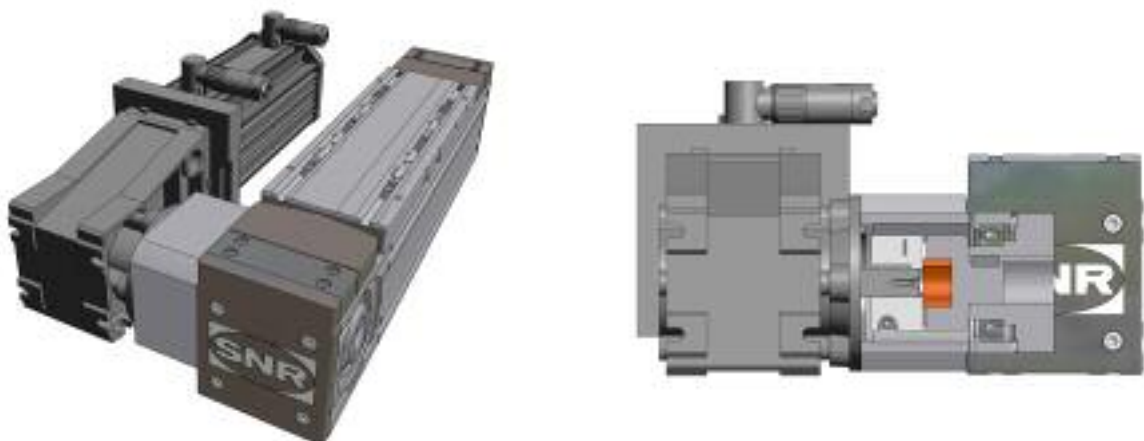


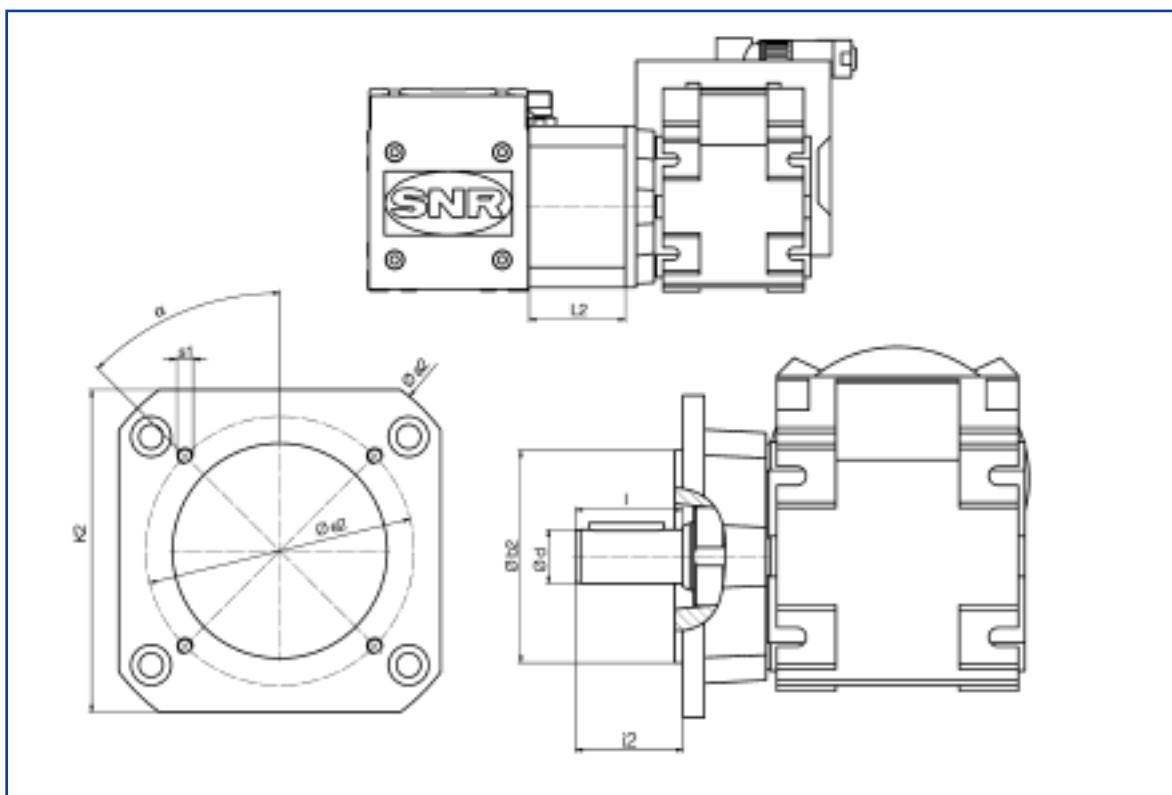
Adapter/coupling box for toothed belt drive

With the simplest form of connection, the output shaft of the gearbox or motor is inserted directly into the hollow shaft of the drive belt pulley. The drive is bolted to the linear axis via a flat adapter plate. The force transmission takes place positively via the feather key. The prerequisite here is that the output shaft diameter corresponds to the respective hollow shaft diameter of the axis (see axis datasheet).



Adaptation via the integrated coupling in combination with a coupling box is however universal. The coupling on the axis side is bolted to the drive belt pulley and offers optimal operational reliability, even at high dynamic performance, through its torque transmission actuated by adherence. A wide selection of coupling boxes are available for commercial drives with a standardised B5 flange.





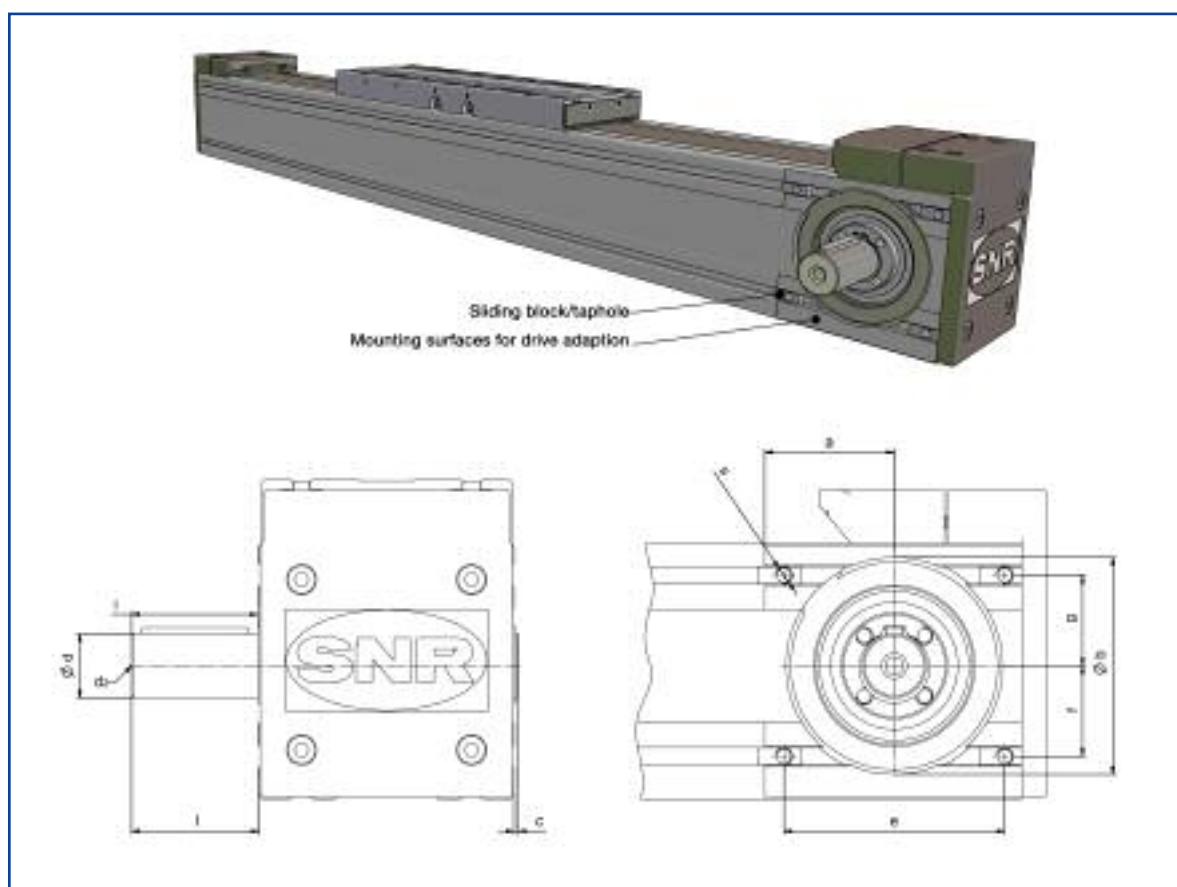
Linear axis	Design	e2	α	s1	b2	d min.	d max.	i2 . max	i2-l max	k2	a2	L2
AXC40-Z	B5	63	45°	4 x M4x8	40	6	10	23	7	54	72	37,5
AXC60-Z / -A	B14	52	45°	4 x Ø5,5	40	14	14	47	5	60	-	5
	B14	54	0°	4 x Ø6,5	44	14	14	60	18	70	80	18
	B14	65	0°	4 x Ø6,5	44	15	18	52	21	-	80	71
	B14	70	45°	4 x Ø5,5	60	14	24	40	15	64	80	65
	B5 / B14	80	0°	4 x M6x15	60	12	18	34	3	-	100	53
	B14	80	0°	4 x Ø6,5	68	20	24	46	21	-	90	71
	B5 C120	100	45°	4 x M6x8	80	14	14	50	8	100	120	8
AXC80-Z / -A	B14	61	90°	6 x Ø5,5	48	20	20	71	12	80	-	12
	B14	65	0°	4 x Ø6,5	44	15	25	50	16	80	100	74,5
	B14	70	0°	4 x Ø6,5	55 (invers)	20	20	69	10	82	100	10
	B14	80	0°	4 x Ø6,5	68	22	25	52	22	80	90	81
	B14	99	45°	4 x Ø8,5	60	10	28	44	7	85	115	66
	B5 C120	100	45°	4 x M6x15	80	14	19	40	3	83	110	62
	B5 C120	100	45°	4 x M6x12	80	20	20	72	12,5	-	120	12,5
	B5	115	45°	4 x M8x15	95	19	25	53	16	105	140	75
	B5 C160 / B14	130	45°	4 x M8x16	110	19	25	52	15	120	150	74
AXC120-Z / -A	B14	90	0° / 90°	6 x Ø9	70	30	30	108	14	120	150	14
	B5 C120	100	45°	4 x M6x18	80	19	25	50	7	120	150	72
	B5 C120	100	45°	4 x M6x12	80	30	30	107	13	120	-	13
	B14	100	0° / 90°	6 x Ø9	80 (invers)	30	30	106	12	120	150	11,5
	B5 C160	130	0° / 30°	12 x M8x12	110	30	30	107	13	-	160	13
	B5 C200	165	45°	4 x M10x20	130	30	30	119	25	-	200	25

AXC/AXLT drive adaptation



Fixing dimensions/plug-in shaft for toothed belt drive

If the user is carrying out drive adaptation, the intended mounting site must be specified with the order as the axis profile is machined to provide an optimal seat for the drive adapter. The appropriate sliding blocks for drive fixing are included in the scope of delivery.

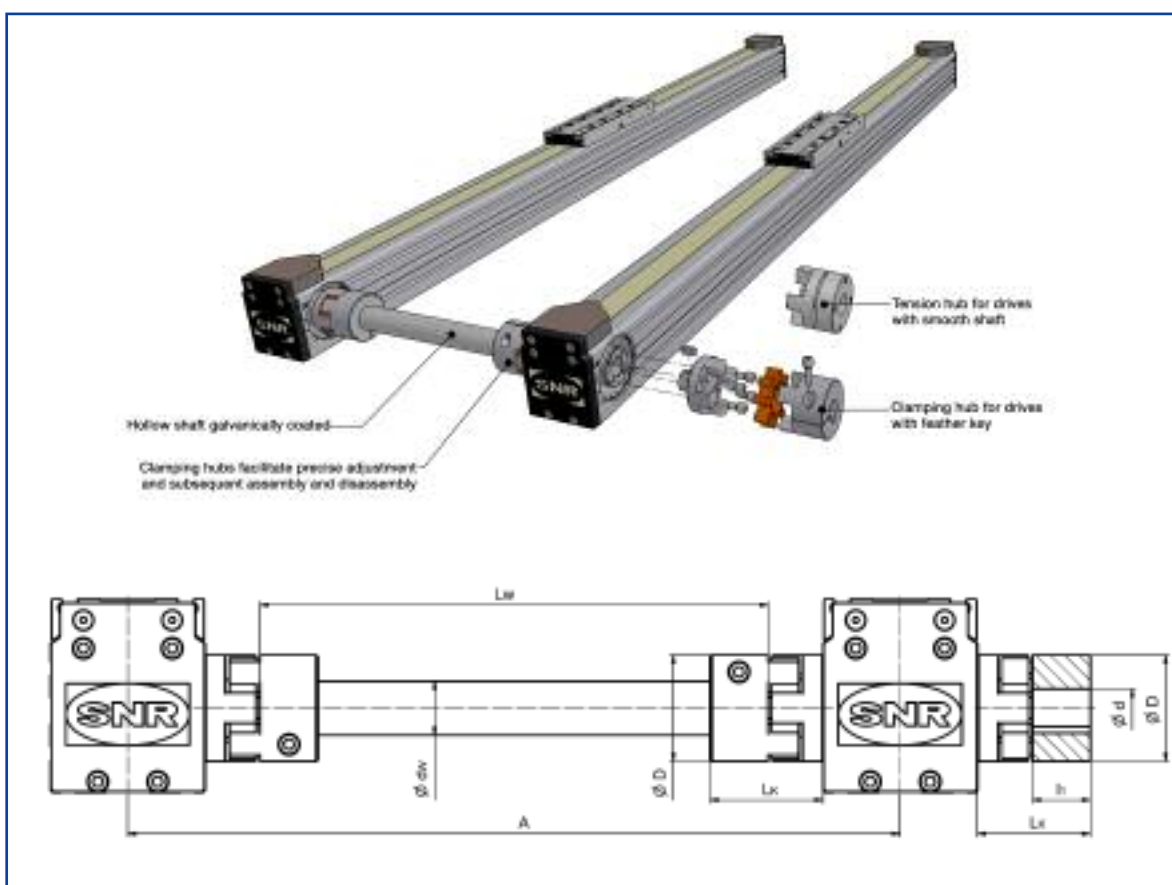


Linear axis	a	b	c	d h6	d2	e	f	g	i	l	s
AXC40-Z	23	26H7 x 1	1	10	M4 x 7	34	9,9	8,1	29,5	30	M3 x 5
AXC60-Z / -A	34	47H7 x 1	1	14	M5 x 8	54	22,5	17,5	30	30	M5 x 6
AXC80-Z / -A	42	68H7x 2	2	20	M6 x 10	72	23	20,5	39,3	40	M5 x 9
AXC120-Z / -A	61	102H8 x 2	2	30	M10 x 17	104	42,5	42,5	59,5	60	M8 x 12
AXC120-A *	Ø162	110H8x3,5				Ø130	-	-			M8 x 13

* Illustration see dimension sheet page 40.

Coupling and connecting shaft

Axes configured in parallel may be coupled via a connecting shaft in order to transfer the torque from the axis driven by the motor to the second axis.



Linear axis	Dimensions							Clamping hub			Tension hub		
	dw	Lw	A min. ¹⁾	A DKM ²⁾	D	LK	l1	d min.	d max.	TA [Nm]	d min.	d max.	TA [Nm]
AXC40-ZK	14x2	A - 79	125	87 ⁺²	30	31	11	8	14	1,34	-	-	-
						38	19	-	-	-	10	14	1,34
AXC60-..K	22x2	A - 110	188	120 ⁺²	40	50	25	12	24	10,5	10	20	3
AXC80-..K	28x2,5	A - 137	230	154(160) ⁺³	55	59	30	12	28	10,5	15	28	6
AXC120-..K	38x4	A - 180	285	198 ⁺³	65	65	35	20	38	25	18	38	6
AXC120-..P.K		A - 140	245	158 ⁺³		25	-				-	-	

1) with option of removal without disassembling the linear axes

2) DKM= Special design with double-gimballed centre

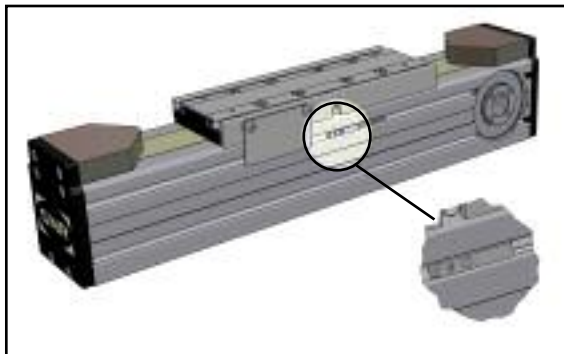
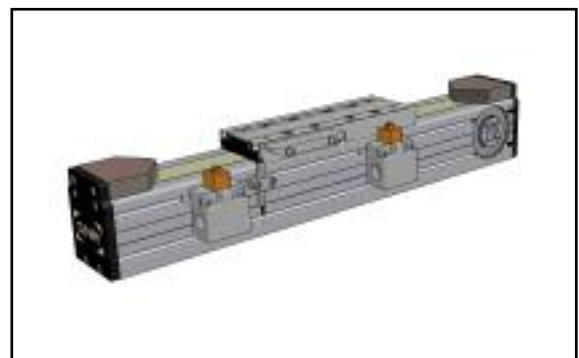
Switches



Switch attachment on AXC/AXLT

Depending on the requirement, mechanical switches with various IP protection ratings and inductive proximity switches with conventional output circuits are available.

The mechanically activated switches are used in all cases to switch off the drive in an emergency, before the mechanical end stop shock absorbers are reached. These can also be combined with external inductive proximity switches to set additional switching points for reference runs for example.



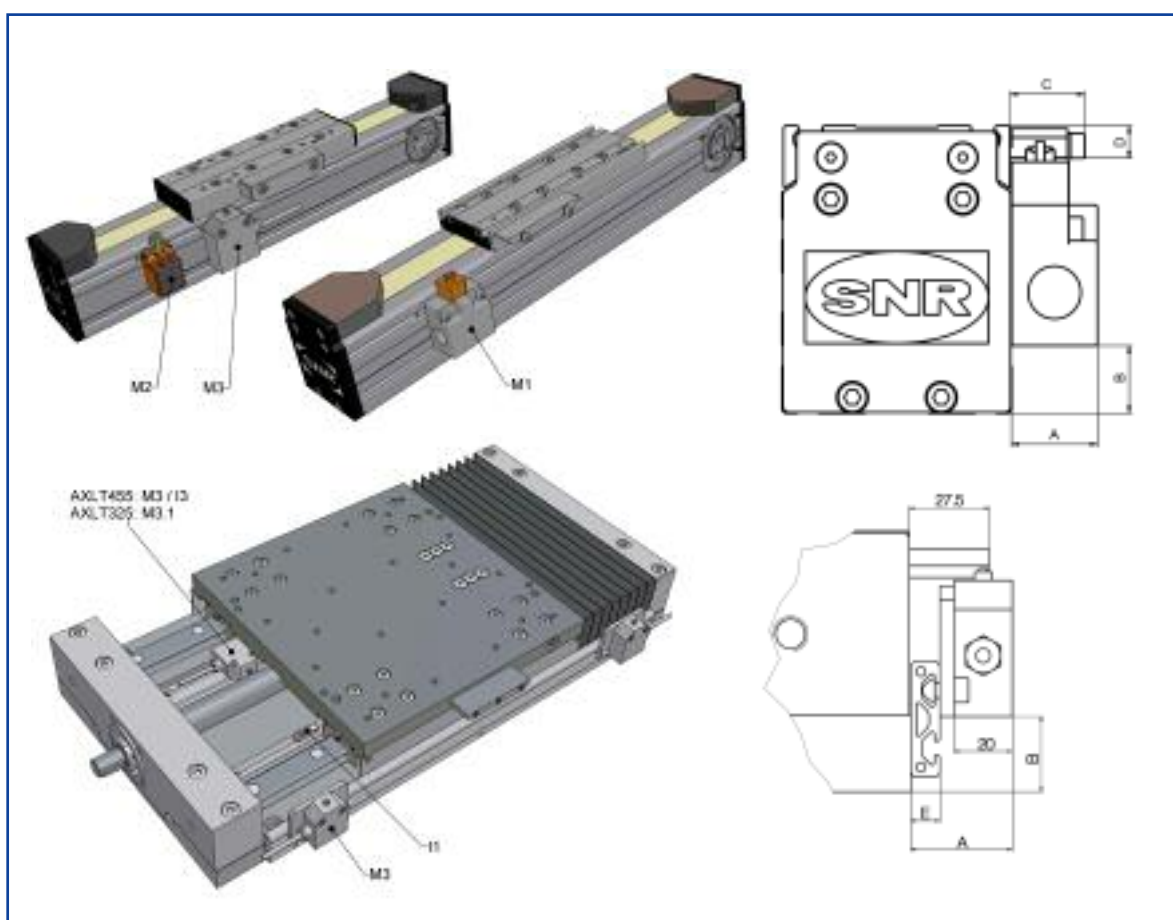
Our inductive proximity switches for slot installation are the most compact variants. They finish flush with the surface of the aluminium profile of the axis and form almost no interference contours. The switches are available as PNP NC/NO contacts or NPN NC/NO contacts.

Professional cabling can be simply carried out with the sensor boxes available as standard. All switching signals are consolidated here.

With the aid of conventional pre-assembled cables, the connection to the signal-processing controller can be established very quickly.



Mechanical switches AXC60-120/AXLT155-455



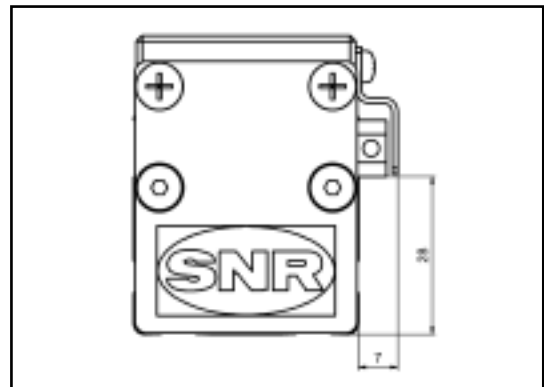
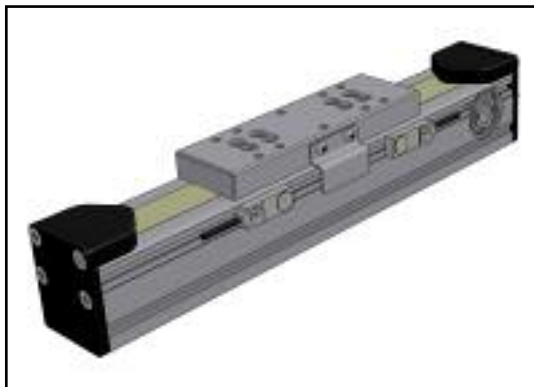
Linear axis	Switches	A	B	C	D	E
AXC60-S / -Z	M2	22	19,5	25	11,5	-
	M3	20	12,5	18	19	-
AXC60-A	M1	30	9,5	18	55	-
AXC80	M1	30	25,5	26	11	-
AXC120	M1	30	64,5	26	20	-
AXLT155	M3	25	1	-	-	-
AXLT225	M3	25	11	-	-	5
AXLT325	M3	35	26	-	-	10
AXLT455	M3	34	39,5	-	-	14

Switches

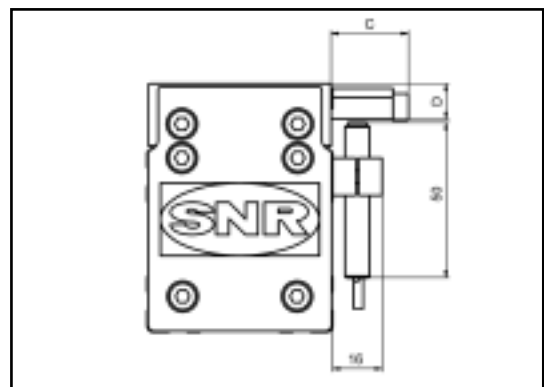
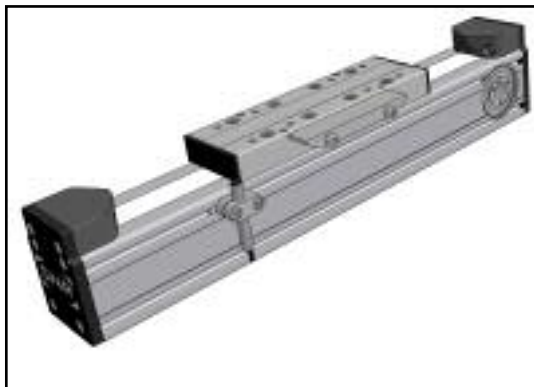


Switch attachment on AXC/AXLT

Inductive proximity switches AXC60-120 (externally mounted)



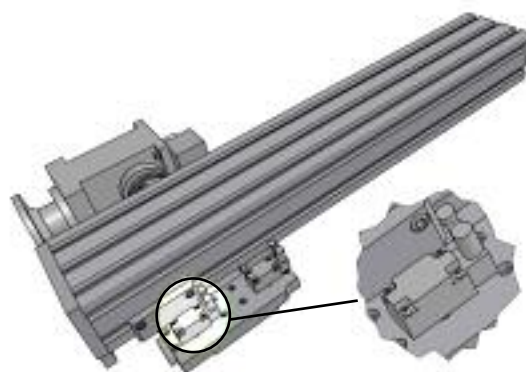
Inductive proximity switch AXC40 (externally mounted)



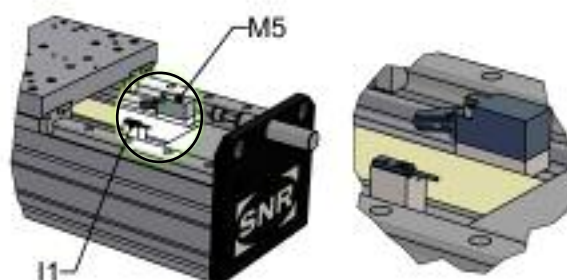
Switch attachment on AXS

All AXS linear axis are available as standard with mechanical switches. Inductive proximity switches are also available for the AXS280-Z gantry axis.

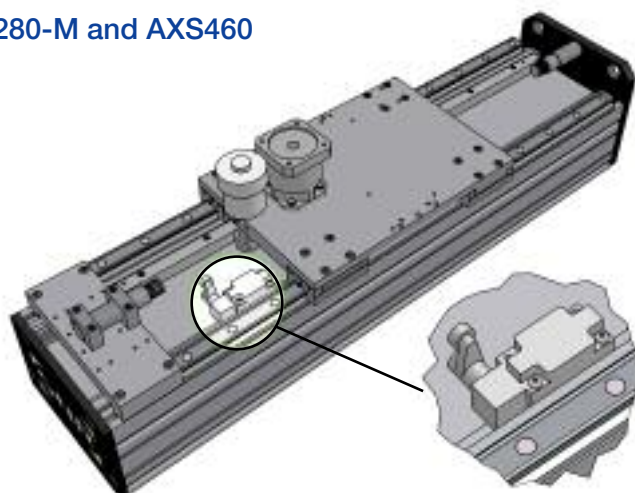
Lifting axes AXS160-M to AXS280-M and telescopic axis AXS120



Gantry axis AXS280-Z



Gantry axes AXS280-M and AXS460





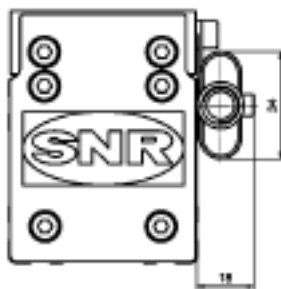
Switches

Sensor box on AXC/AXLT

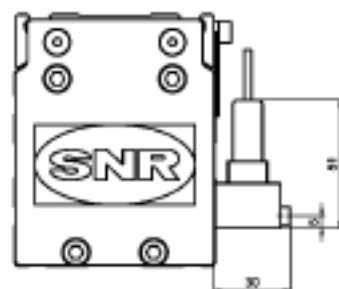
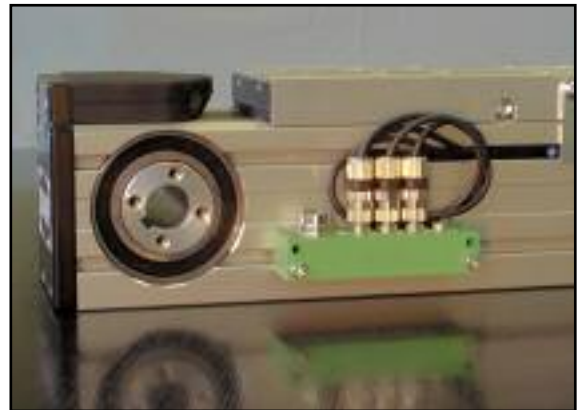
Depending on the number of switches required, either a 2-part distributor can be used or a sensor box to which four or more switches can be connected. Both designs have an IP67 protection rating and are supplied completely wired as shown in the illustration.

A 14-pin connector with M16 thread for the sensor box or a 5-pin connector with M8 thread for the 2-part distribution block are available for connection to signal-processing control.

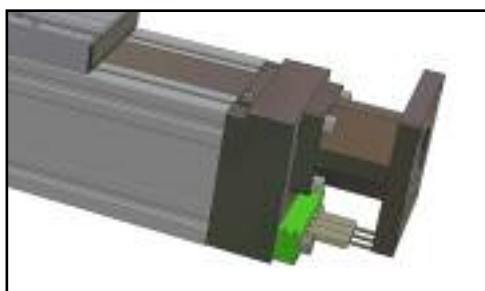
2-part distribution block



Sensor box for 4 switches



To avoid interference contours, the sensor box on the AXC120-S and AXLT325 can also be mounted under the motor adapter to save space.



Technical data for switches

Mechanical switches

	Service life	Housing material	Connection	Protection class
Switch M1/M4/M5 AXC60-A AXC80/120 AXS	30 x 10 ⁶ Switching cycles	Plastic	M20 x 1,5 Conductor cross section: 0,5...2,5 mm ²	IP67
Switch M2 AXC60-S/Z	3 x 10 ⁶ Switching cycles	Plastic	Screw connection 4 x M3,5 Conductor cross section: 0,5...1,5 mm ²	IP30
Switch M3 AXC60-S/Z AXLT155 – AXLT455	10 x 10 ⁶ Switching cycles	Metal	Screw connection Conductor cross section: max. 1,5 mm ²	IP67
Switch M3.1 (Löt-Anschluß) AXLT325	10 x 10 ⁶ Switching cycles	Metal	Soldered joint Conductor cross section: max. 1,5 mm ²	IP67

Control element: Jump feed switch (forced separation)/1x NC contact and 1x NO contact

Inductive proximity switch

	Input supply voltage	Max. load current	Indexing precision	Cable length	Protection class
Switch I1 NPN- /PNP- NO or NC contact AXC40 AXLT155 – AXLT325 AXS	10...30 V DC	100 mA	≤ 10% Switch interval	2 M	IP67
AXC-Initiator ¹⁾ PNP- Öffner / Schließer NPN-Öffner AXC60-S/Z – AXC120-S/Z	10...35 V DC	100 mA	≤ 2% Switch interval	3 u. 10 M	IP67
Switch I2 AXC60 – AXC120	12...30 V DC	100 mA	≤ 5% Switch interval	3M	IP67
Switch I3 AXLT455	10...30 V DC	130 mA	≤ 5% Switch interval	bolting wie M3	IP67

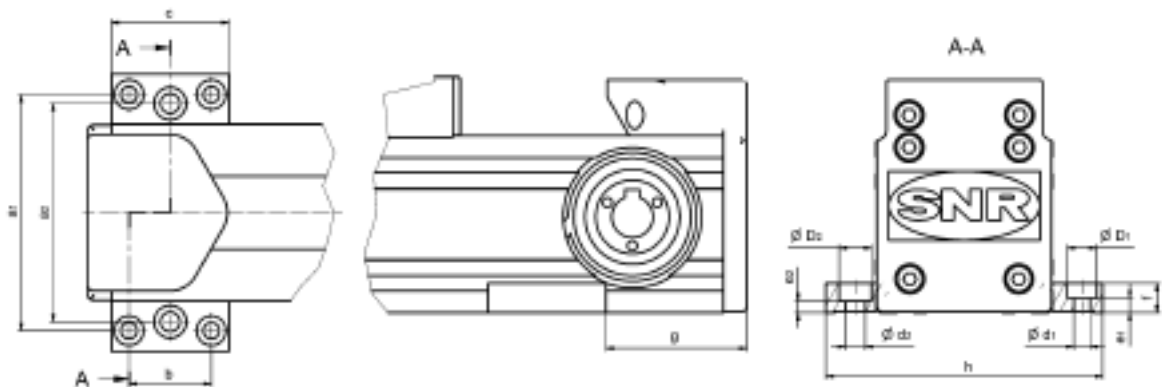
1) With AXC60 max. 2 switches per side
With AXC80 max. 3 switches per side

Fixing and connection elements



There is a range of optimally coordinated fixing elements available for the fixing of the different linear modules. Sliding blocks, fixing strips and adapters offer the broadest range of options for bolting our modules to mounting surfaces or to each other. The range is completed by gantry supports coordinated to the linear axes and axis systems.

Fixing strips



Linear axis	Article description	a1	a2	b	c	d1	D1	e1	d2	D2	e2	f	g ¹⁾	h
AXC40	AXC40-Fixing strip	55	-	28	40	5,5	10	7	-	-	-	13	38 ²⁾	66
AXC60 ³⁾	AXC60-Fixing strip	80	74	28	40	5,5	10	5	6,6	11	4	10	48	94
AXC80	AXC80-Fixing strip	94	-	50	70	6,6	11	14	-	-	-	20	76	108
AXC120 ⁴⁾	AXC120-Fixing strip	136	-	60	78	9	15	11,5	-	-	-	22	105	160
	Fixing strip 2	140	-	40	80	9	15	13	-	-	-	22	105	160
	Fixing strip 3	140	140	80	120	9	15	13	9	15	13	22	105	160

¹⁾ Please note dimension K2 from the drive adapter or gearbox (see page 77) or dimension a of the drive-side machining (see page 78).

²⁾ with mounted coupling

³⁾ suitable for standard MB profiles in grid dimension 20

⁴⁾ suitable for standard MB profiles in grid dimension 40

The number of fixing strips is dependent on the load and the length of the linear axis.

Sliding blocks

Design E

- Standard sliding block
- St galvanised
- Can be swivelled into any position
- Fixed via resilient ball



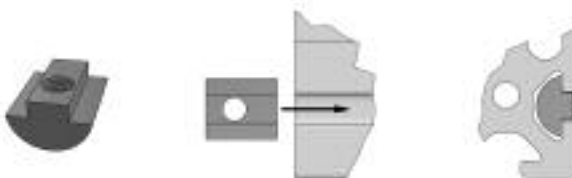
Design R

- For efficient component mounting
- Zn galvanised
- Premounted on the component and used in any position
- Locked by turning the screw

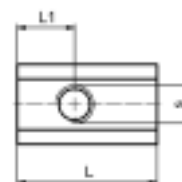


Design S

- Heavy duty sliding block
- St galvanised
- Insertion of profile end
- Up to slot width 8.2 fixed via resilient ball



Linear axis	Article description	Design	s	L	L1 ¹⁾	TA [Nm]	max. tensile load [N]
AXC40	Sliding block 5 ST M3	E	M3	12	3	1,5	500
	Sliding block 5 ST M4	E	M4	12	4	3,0	500
AXC60	Sliding block 5 ST M5	E	M5	12	4	4,5	500
	Sliding block 5 Zn M3	R	M3	5	2,5	1,0	50
AXC80	Sliding block 6 ST M4	E	M4	17	5	4,0	1750
	Sliding block 6 ST M5	E	M5	17	5	8,0 ²⁾	1750
	Sliding block 6 ST M6	E	M6	17	5,5	14 ²⁾	1750
	Sliding block 6 Zn M4	R	M4	15	7,5	1,5	150
AXC120	Sliding block 8 ST M4	E	M4	22	9	4,0	2500
	Sliding block 8 ST M6	E	M6	22	9	14 ²⁾	3500
AXLT155	Sliding block 8 ST M8	E	M8	22	9	25	5000
AXLT225	Sliding block 8 Zn M4	R	M4	19	9,5	1,5	250
AXS120T	Sliding block 8 Zn M5	R	M5	19	9,5	1,5	250
AXS160	Sliding block 8 ST M5 trafficking cash	S	M5	22	9	8,0 ²⁾	2500
AXS200	Sliding block 8 ST M6 trafficking cash	S	M6	22	7	14 ²⁾	3500
	Sliding block 8 ST M8 trafficking cash	S	M8	20	7	34 ²⁾	5000
AXS280	Sliding block 12 ST M6	S	M6	20	10	14 ²⁾	3500
	Sliding block 12 ST M8	S	M8	20	10	34 ²⁾	6000
	Sliding block 12 ST M10	S	M10	35	11,5	46	10000
AXS230	Sliding block DIN508-14 M8	S	M8	22	11	34 ²⁾	6000
AXS460	Sliding block DIN508-14 M12	S	M12	22	11	85	10000



1) Maximum values, deviating dimensions possible

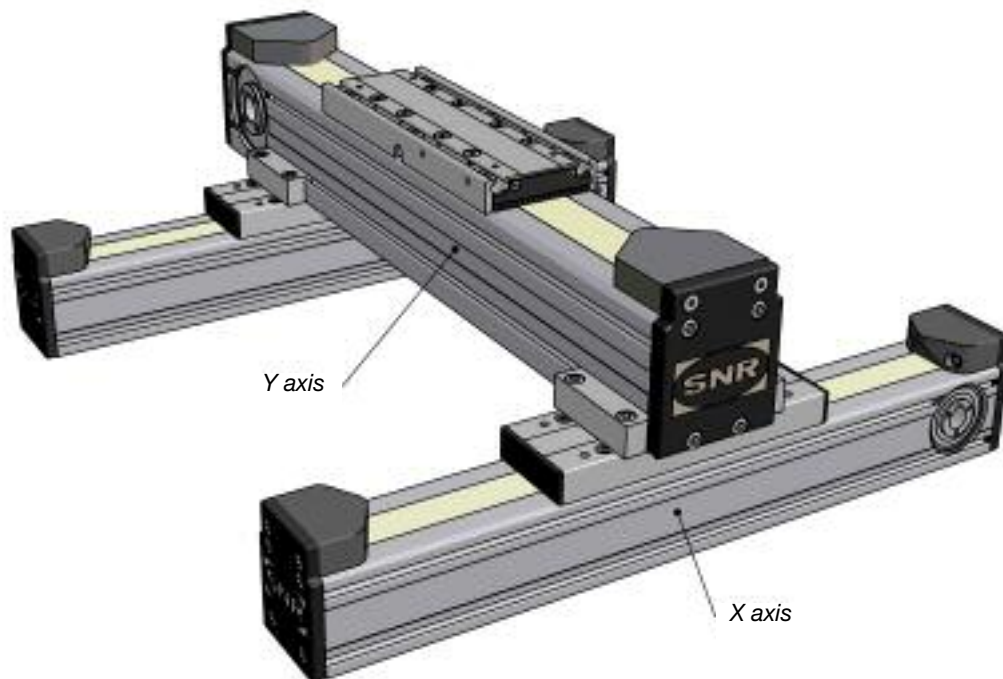
2) When utilising the maximum tightening torque, strength category 10.9 is necessary

Fixing and connection elements



AXC direct connection

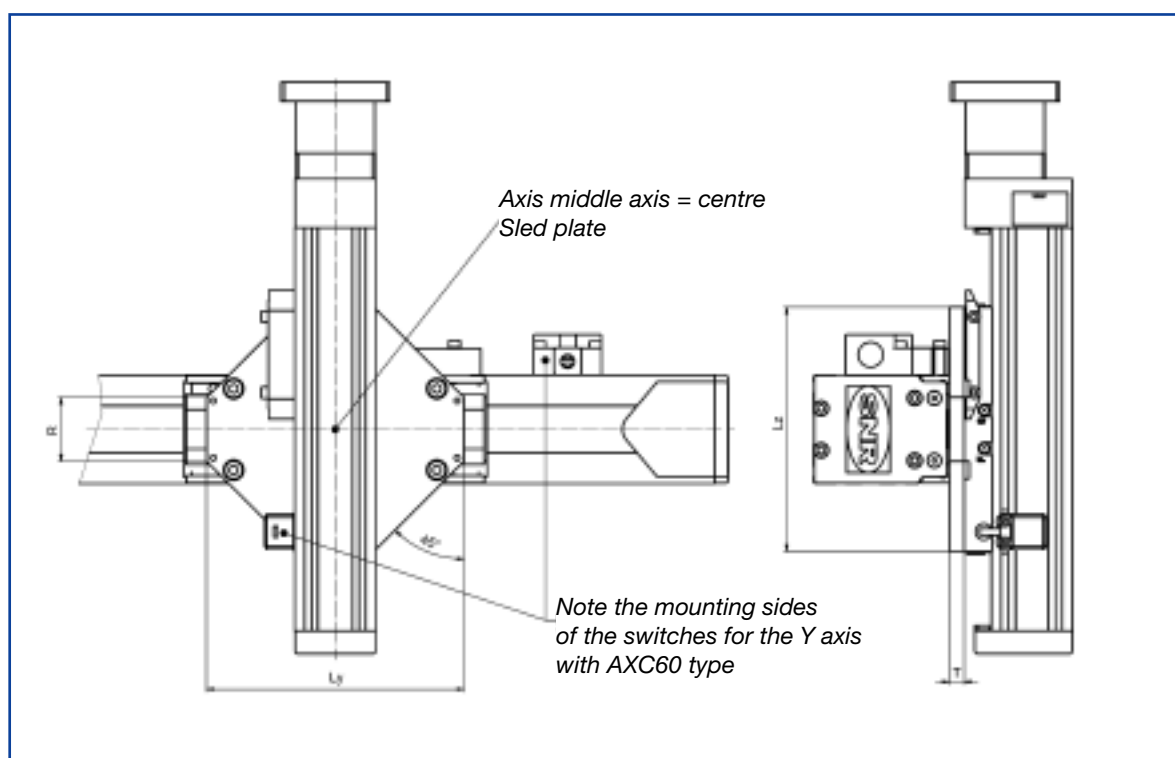
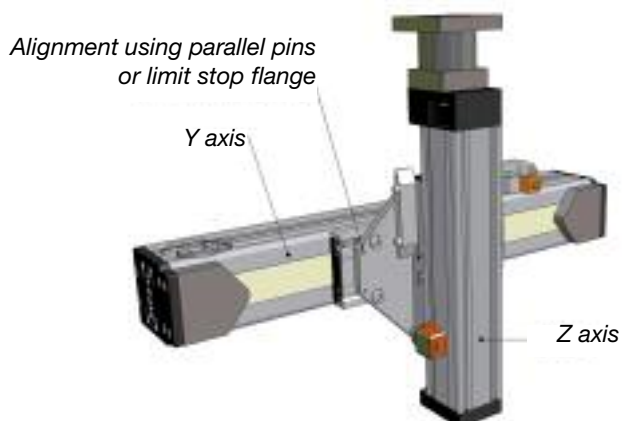
We offer our users the ultimate in flexibility for the configuration of the axes in a multi-axis system. A wide range of adapters in different designs are available for this. The connection sets include all other necessary connection elements (e.g. adapter plates, screws etc.).



X axis	Y axis			
	AXC40	AXC60	AXC80	AXC120
AXC40	AXC-Direct-connection-40-40	AXC-Direct-connection-40-60		
AXC60		2x AXC-Direct-connection-60-60	AXC-Direct-connection-60-80	AXC-Direct-connection-60-120
AXC80				AXC-Direct-connection-80-120
AXC120				AXC-Direct-connection-120-120
MB-Profile Raster 40		AXC-Direct-connection-60-60 + 2x sliding block.8 ST M6		2 x fixing strip 2 (3) 4 (6) x M8x25 DIN912 4 (6) x sliding block.8 ST M8
MB-Profile Raster 50			AXC-Direkt-connection-60-80 + 4x sliding block.8 ST M6	

See page 86 for fixing strip dimensions.

AXC cross connection

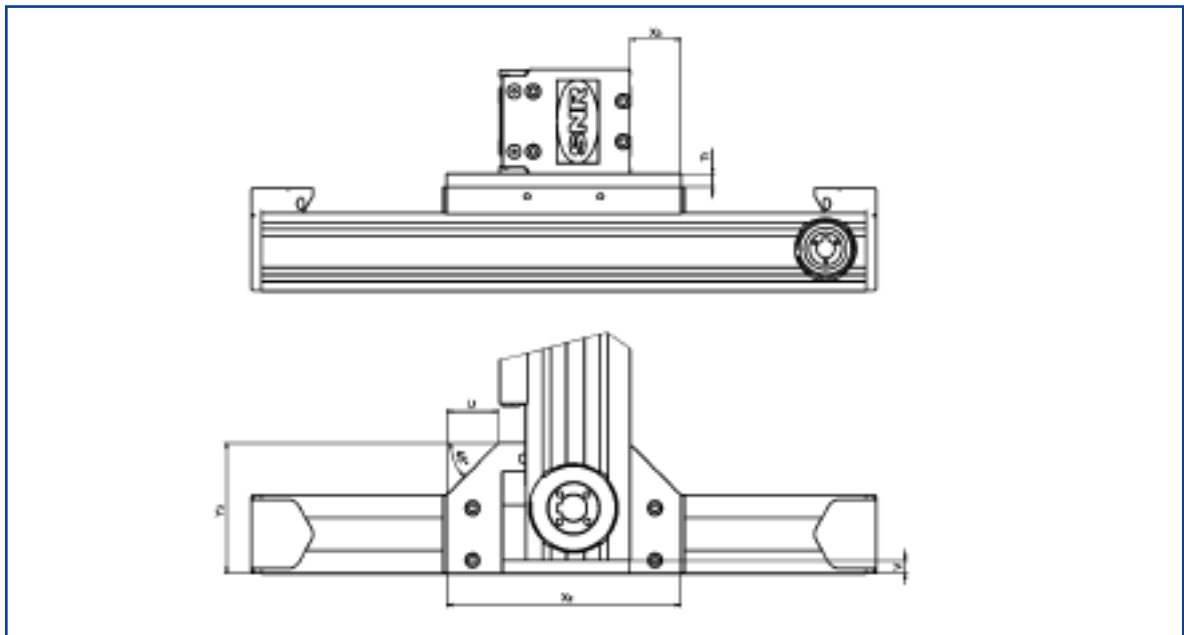
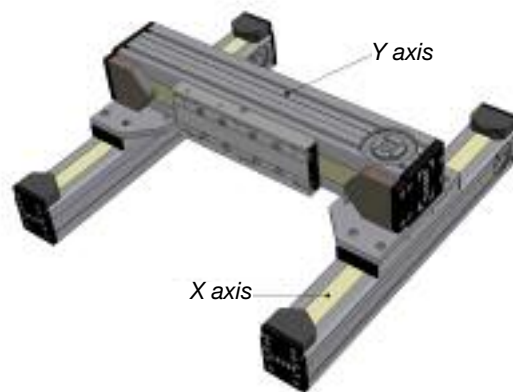


Y axis	Z axis	Ly	Lz	R	T	Order code
AXC60	AXC40	90	90	58	10	AXC-Cross connection-60-40
AXC60	AXC60	90	90	58	12	AXC-Cross connection-60-60
AXC80	AXC60	190	180	47	11	AXC-Cross connection-80-60
AXC80	AXC80	220	220	77	15	AXC-Cross connection-80-80
AXC120	AXC80	280	220	116	20	AXC-Cross connection-120-80
AXC120	AXC120	280	280	116	20	AXC-Cross connection-120-120

Fixing and connection elements



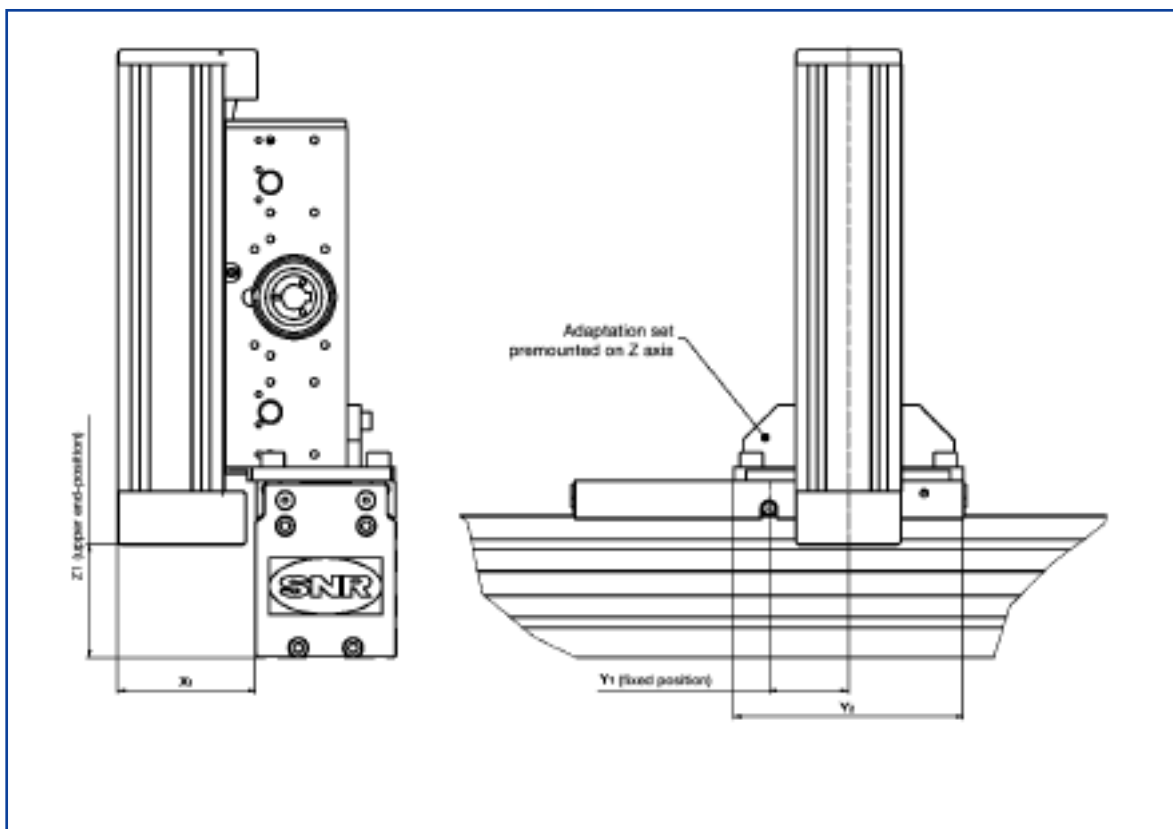
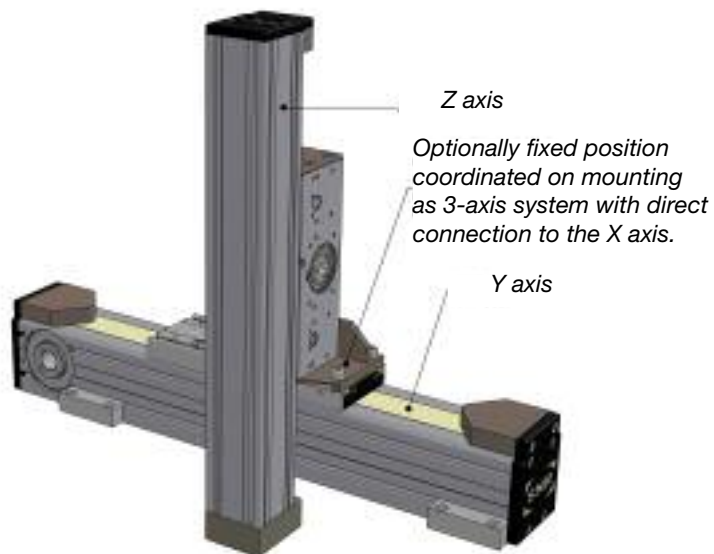
AXC gantry connection



X axis	Y axis	T1	U	V	X2	X3	Y3	Article description
AXC40	AXC60	8	20	-11	98	19	59	AXC gantry connection 40-60
AXC60	AXC80-Z AXC80-S / -A	10	40	10 22	180	39	100	AXC gantry connection 120-280
AXC80	AXC80-Z AXC80-S / -A	10	-	0 10	155	19	80	AXC gantry connection 60-80
AXC80	AXC120-Z AXC120-S / -A	15	6	-20 ¹⁾ / 10 -20 ¹⁾ / 25	194	16	140	AXC gantry connection 80-80
AXS120	AXS280	30	-	-40 ¹⁾	170	0	200	AXC gantry connection 80-120

¹⁾ Position on X-axis fixed with parallel pins.

AXC-A standard connection



Y axis	Z axis	X1	Y1	Y2	Z1
AXC80	AXC60-A	78	45	130	64
AXC80-A	AXC60-A	78	20	130	64
AXC120	AXC80-A	92	59	150	87,5
AXC120-A	AXC80-A	92	0 / 55	150	87,5

Fixing and connection elements

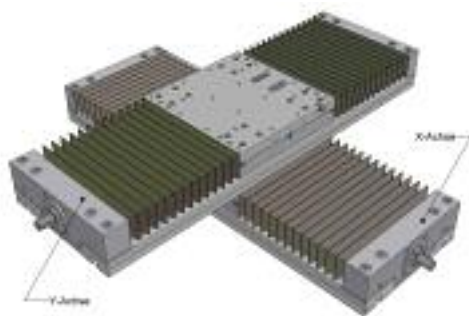


AXLT direct connection

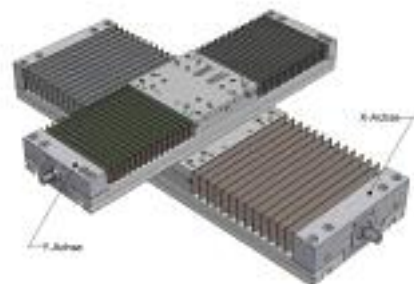
The AXLT linear tables are designed in such a way that they can be mounted as cross tables in the simplest way. Depending on the size, an adapter may not be required.

Cross table variant in the base plate configuration on table top.

Linear tables of the same size or the next smallest size can be mounted on the table top in this configuration. An adapter plate is not required in both cases.



Combination of identical sizes



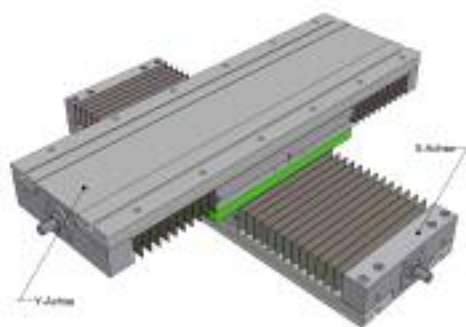
Combination with next smaller size

X axis	Y axis			
	AXLT155	AXLT225	AXLT325	AXLT455
AXLT155	AXLT-direct connection-155-155			
AXLT225	AXLT-direct connection-225-155	AXLT-direct connection-225-225		
AXLT325		AXLT-direct connection-325-225	AXLT-direct connection-325-325	
AXLT455			AXLT-direct connection-455-325	AXLT-direct connection-455-455

AXLT cross connection

Cross table variant in the configuration table top on table top

The linear tables (X axis) can also either be combined with the identical or the next smallest size in this configuration. From size 325 (X axis) an adapter plate is no longer required.



Combination of identical sizes



Combination with next smaller size

X axis	Y axis				
	AXLT155 (LT=220)	AXLT225 (LT=320)	AXLT325 (LT=320)	AXLT325 (LT=450)	AXLT455
AXLT155	AXLT cross connection 155-155				
AXLT225	AXLT cross connection 225-155	AXLT cross connection 225-155			
AXLT325		AXLT cross connection 325-225	AXLT cross connection 325-325	AXLT cross connection 325-325	
AXLT455				AXLT cross connection 455-325	AXLT cross connection 455-455

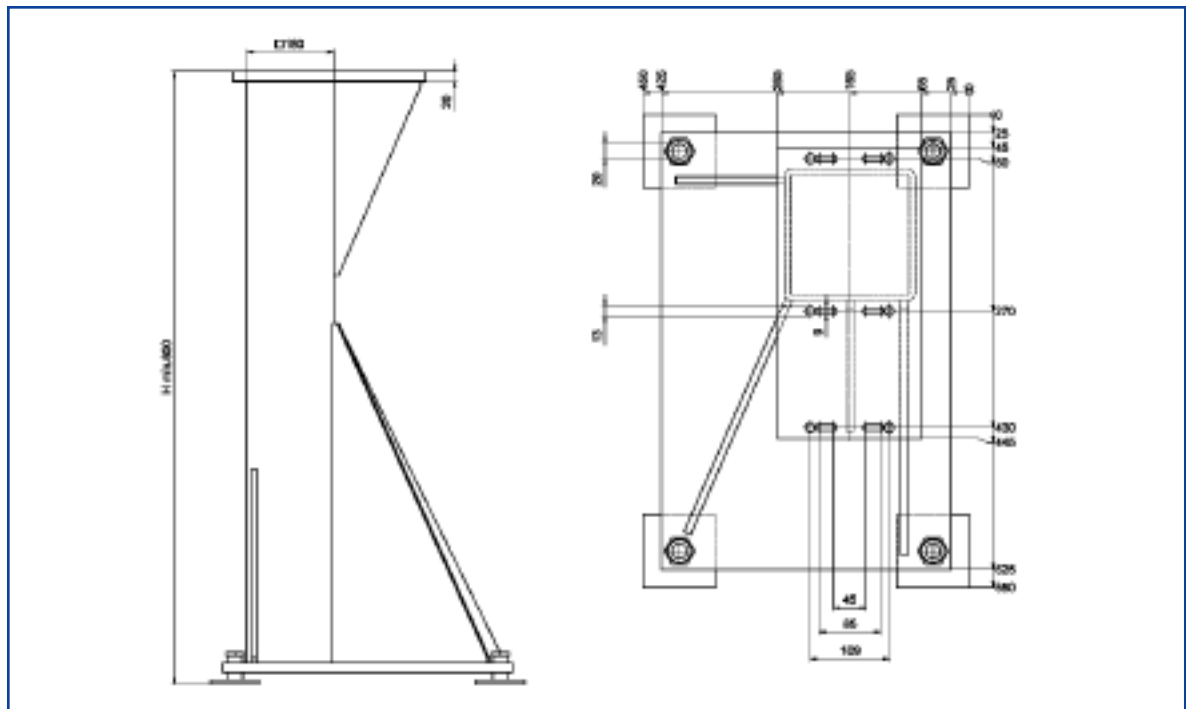
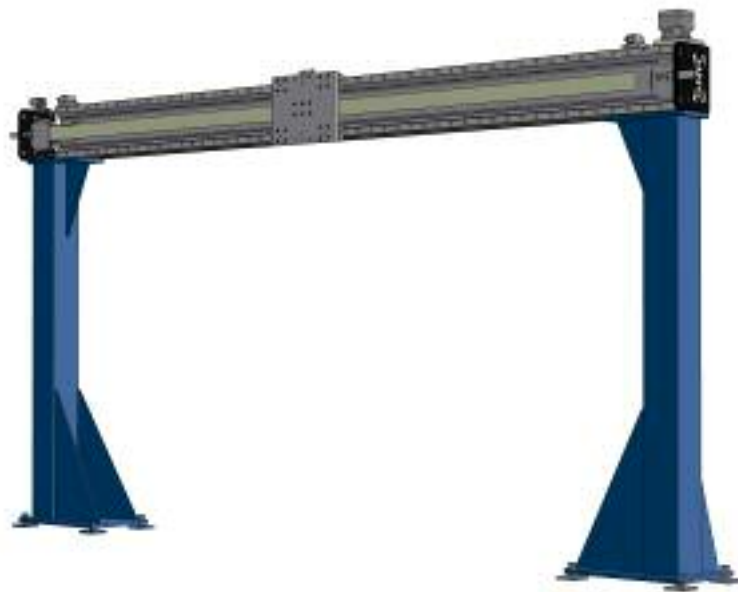
LT = Table length in mm

Fixing and connection elements



SNR gantry support

The SNR gantry supports can be used both with the AXC and the AXS lines.



Channel cover for AXC

Cover profile

In order to facilitate the cleaning of the linear axis or to prevent heavy soiling, the slots of the profile body can be closed with appropriate cover profiles.



Cover profile Al
Colour: Plain



Cover profile PP
Colour: Black

Linear axis	Material	Article description
AXC40 AXC60	PP	Cover profil5.PP.black.2000L
AXC80	PP	Cover profile6.PP.black.2000L
AXC120	PP	Cover profile8.PP.black.2000L
	Al	Cover profile8.3000L plain



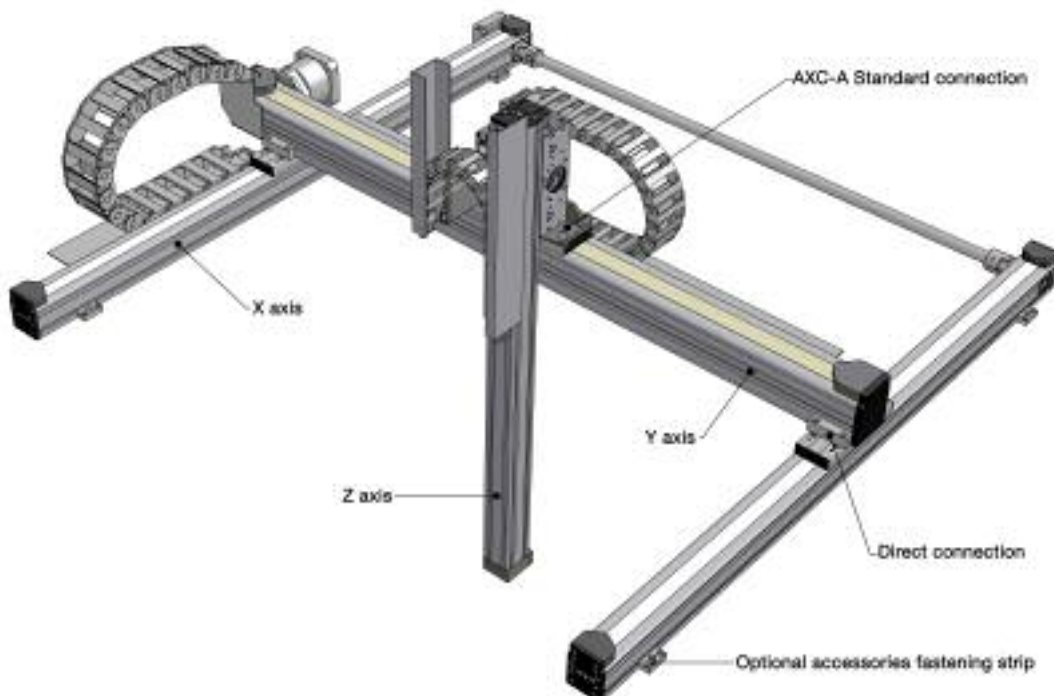
Standard combinations

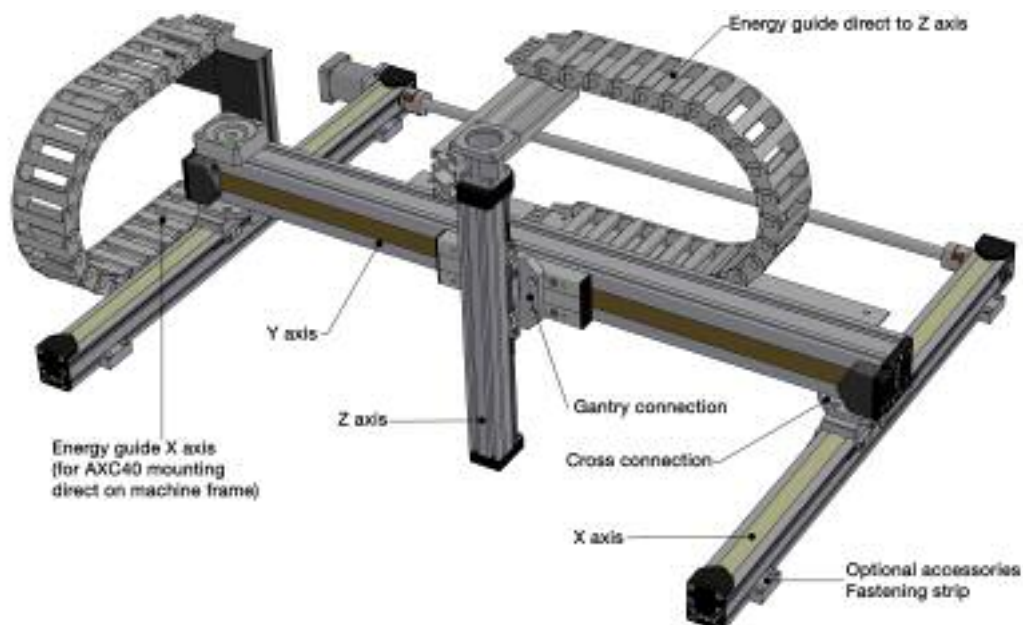
Our standard systems make it possible to considerably reduce design expenditure. The range contains competitive 2 or 3-axis systems which comprise practical combinations of the AXC and AXS ranges.

Standard combinations in the AXC range

All complete systems are pre-assembled with switches, energy chains and all fastening materials. If no energy chain is desired, the individual components are supplied with the necessary fastening material.

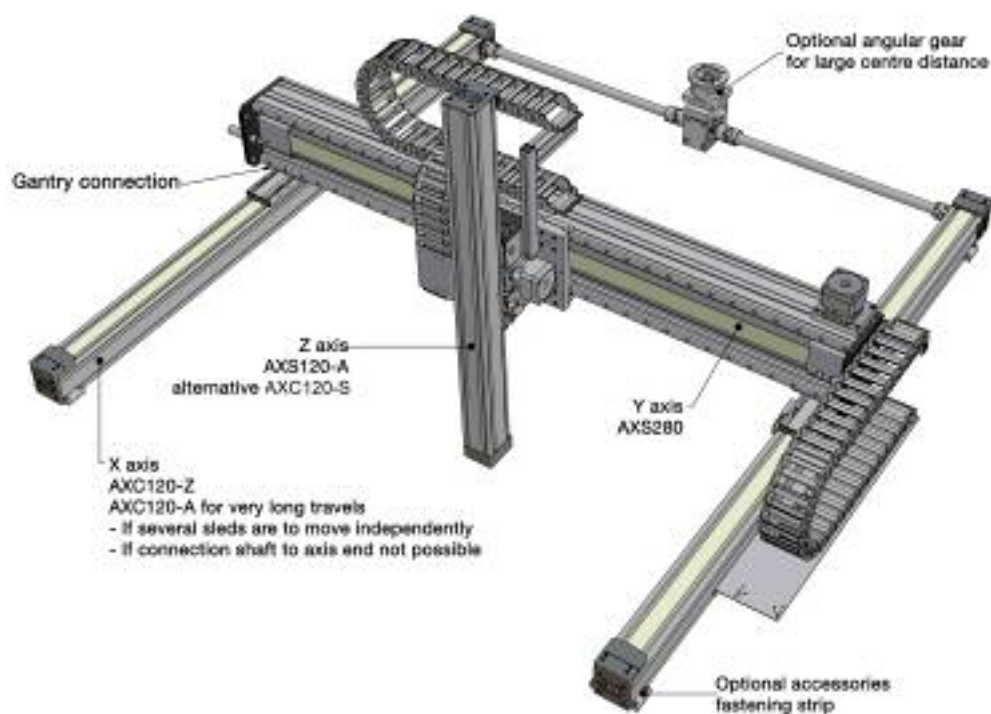
The tables for the direct, gantry, cross and AXC-A standard connections in the chapter Fastening elements (from page 86) give information on the possible combinations of axis sizes and designs from the AXC range in accordance with the images shown below.





Standard combinations in the AXC and AXS range

With large stroke lengths and increasing requirements for load capacity and stiffness, we offer the optimum alternative with a standard combination from the AXC and AXS program.



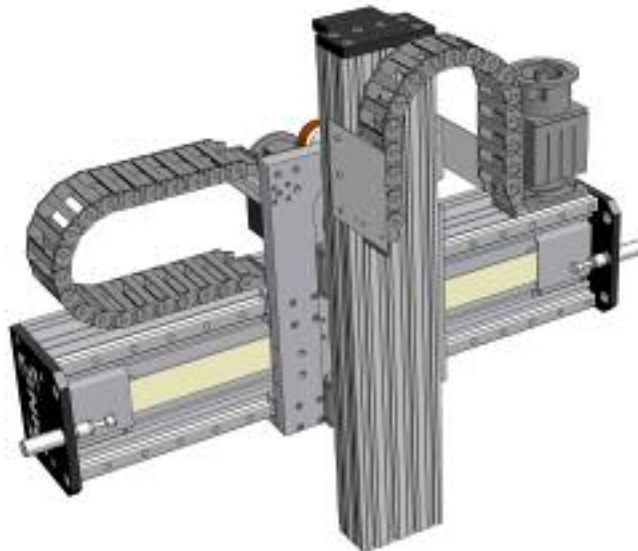
Complete systems



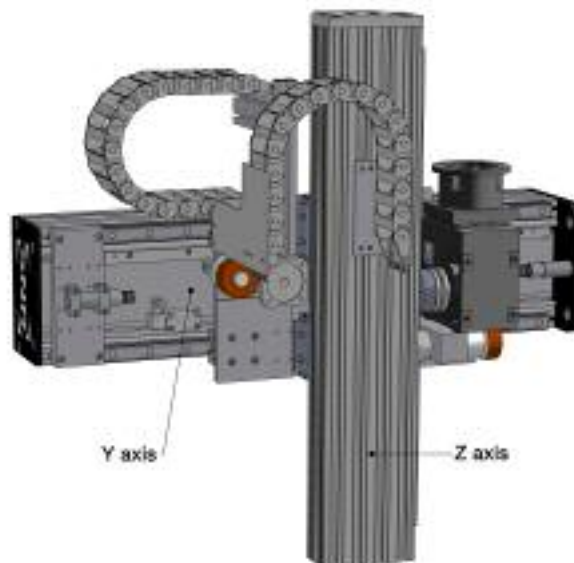
Standard combination in the AXS range

In the upper load area, our standard systems from the AXS range are available.

Standard layout with gantry axis driven by toothed belt

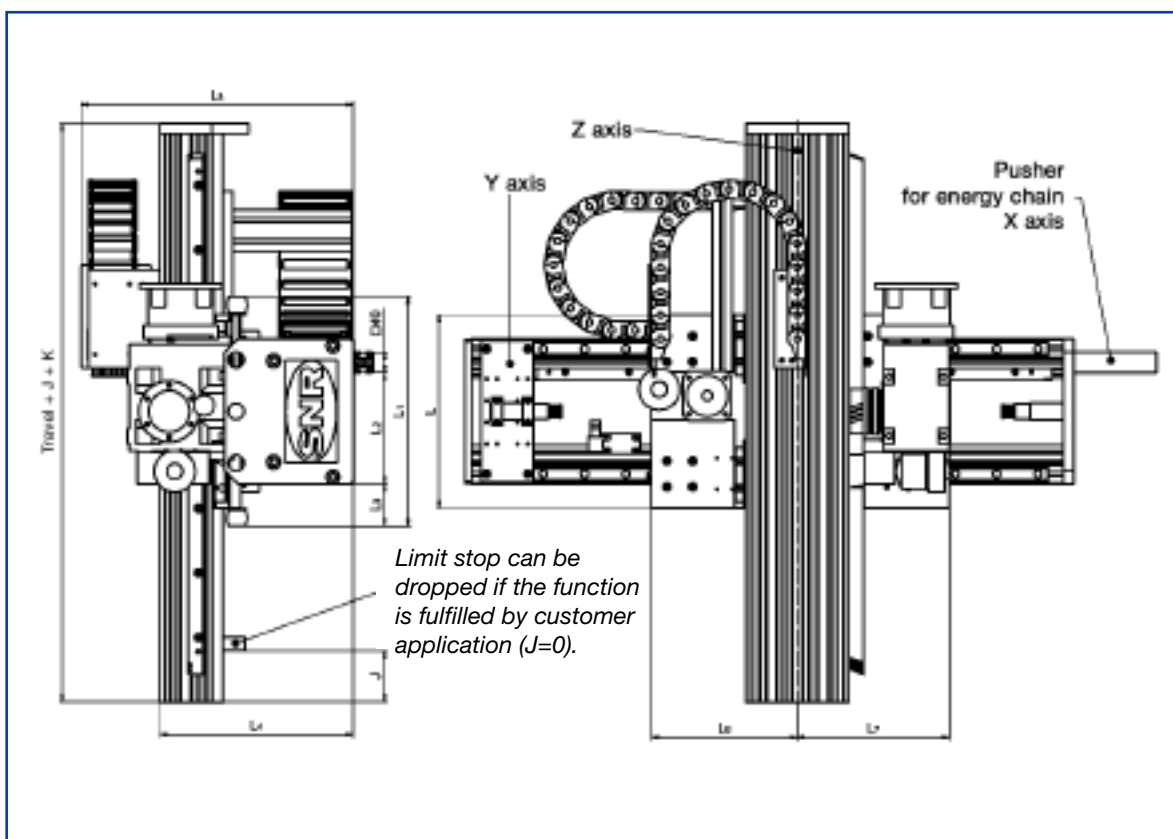


Standard layout with gantry axis with rack drive



Overview of AXS combinations

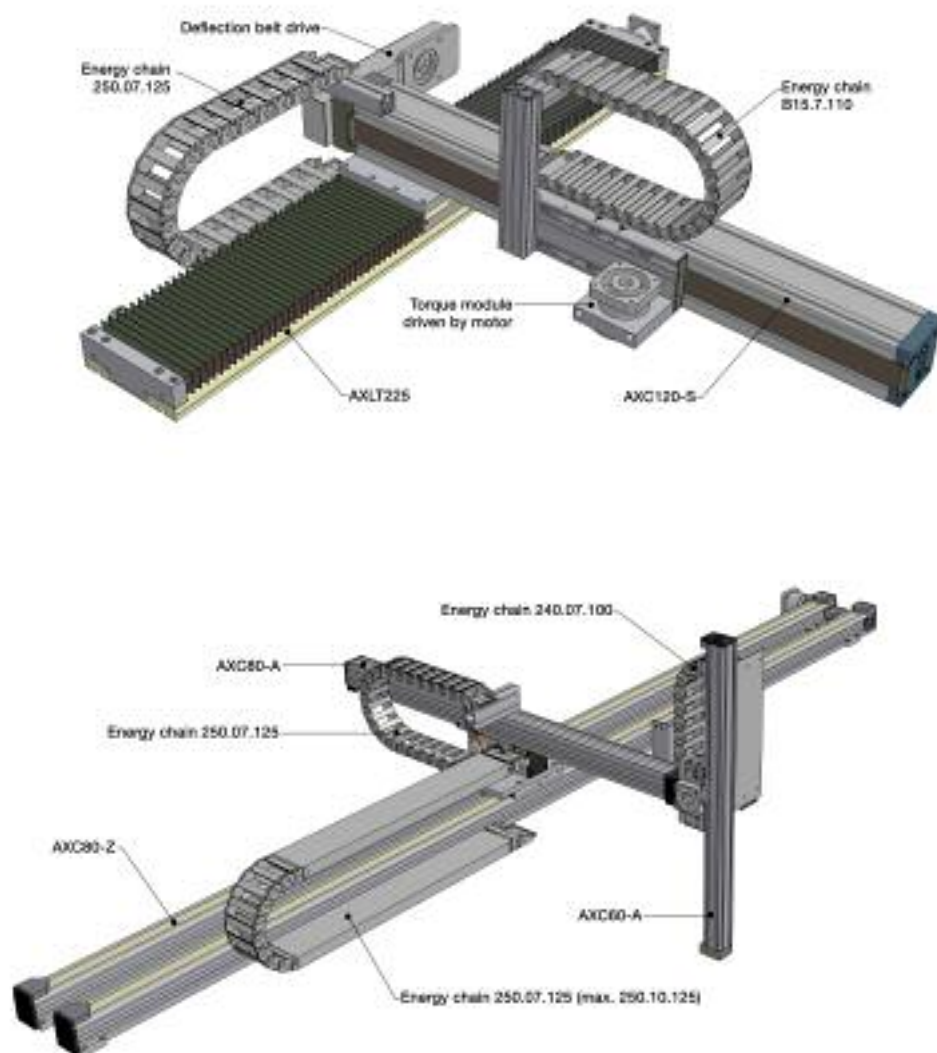
Z axis		Y axis			
		Toothed belt drive		Rack drive	
		AXS280-ZGxx-x30	AXS280-ZGxx-x35	AXS280-M200-x3x	AXS460-M250-H35
Rack drive	AXS160-M160-G30	•			
	AXS200-M200-x30		•		
	AXS200-M250-x30			•	
	AXS230-M320-H30		•	•	•
	AXS280-M400-H35				•
	AXS120T-M400-H25	•	•		



Y axis	Z axis	K	L	L1	L2	L3	L4	L5	L6	L7
AXS280-ZGx-x30	AXS160-M160-G30	657	550	620	215	46	342	445	160	160
AXS280-ZGx-x35	AXS200-M200-x30	725	610	680	215	51	382	520	200	200
	AXS230-M320-H30	515	312	420	215	70	442	581	350	350
AXS280-M200-x35	AXS200-M250-x30	490	375	445	215	82,5	375	528	283	295
	AXS230-M320-H30	515	312	420	215	70	442	581	350	350
AXS460-M250-H35	AXS230-M320-H30	695	492	600	210	70	598	737	350	350
	AXS280-M400-H35	690	493	600	210	70	612	752	355	355

Design examples

The following design examples once again clarify the flexibility of our linear axis systems.



Designation scheme



Type code for SNR linear axes

Ordering example

AXC 60 - Z HW 14 - LR 24 - 1000 - 1278 - 00

Type designation

as specified in catalogue

Drive type

Z: Toothed belt drive
 A: Driven sleds
 S: Screw-type drive
 T: Trapezoidal screw thread
 M: Rack drive
 O: No drive

Drive design

For toothed belt drive

HW: Hollow shaft
 WL (WR): Free shaft end left (right)
 WD: Free shaft end both sides
 KL (KR): Integrated coupling drive side left (right)
 PL (PR): Integrated planetary gears left (right)
 PLK (PRK): Integrated planetary gears left + integrated coupling right (Planetary gears right + coupling left)
 GL (GR): Coupling and coupling box left (right)
 FL (FR): Drive adapter flange (direct connection output shaft/ hollow shaft) left (right)

For spindle drive

G: Coupling box + coupling
 U: Deflection belt drive
 Not specified: free drive shaft

Size code for drive version

For toothed belt drive

- Shaft or hollow shaft diameter (HW, WL, WR, WD, FL, FR)
 - Bore diameter of the coupling (KL, KR, GL, GR)
 - Gear ratio (PL, PR)
 - With the PLK or PRK design, only the gear ratio is specified.

For screw-type drive

Spindle diameter and lead

For rack drive

Feed constants: 160/200/250/320/400

Option code

Is assigned internally and is used to identify options, attachments and any special designs specified in plain text.

Overall length

(stroke + additional length specified in catalogue)

Stroke length

Size of the linear motion system

as specified in catalogue

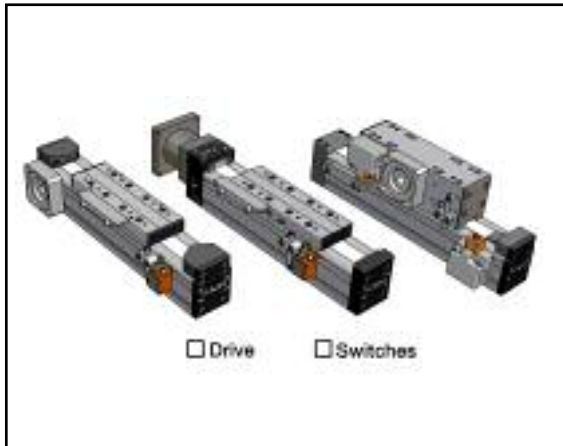
Linear motion system

H: THK linear motion guide type SHS
 S: THK linear motion guide type SSR
 W: THK linear motion guide type SHW
 S: THK linear motion guide type SRS
 G: THK linear motion guide type GSR
 R: THK linear motion guide type HR

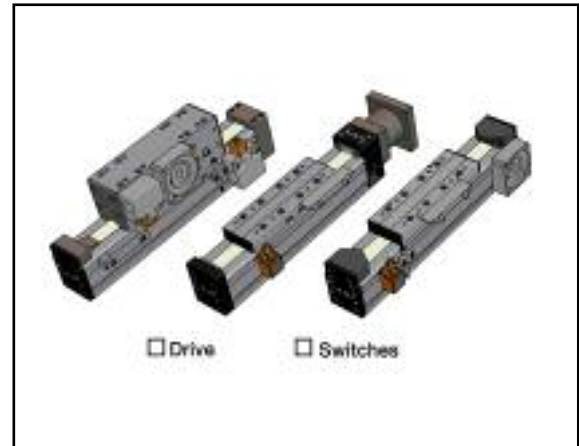
Enquiry form



Attachment for linear axis: AX
please check/enter as appropriate



Left-side attachments

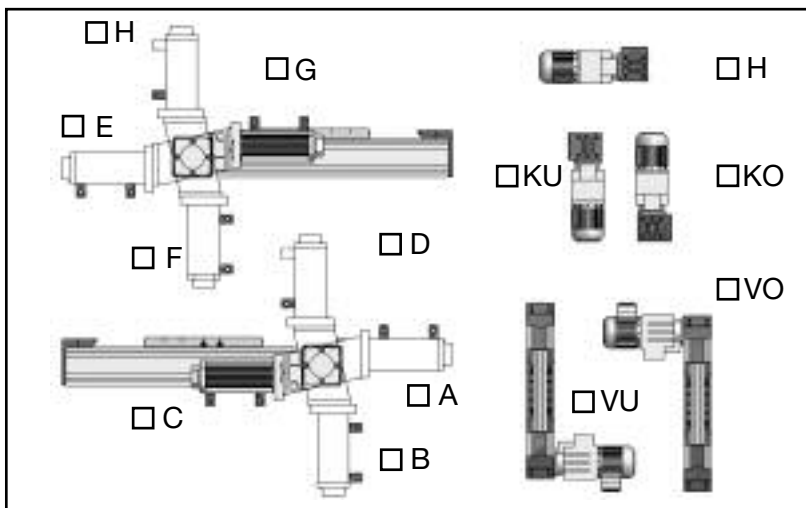


Right-side attachments

A / B = Switching points in the stop positions
 A = _____ B = _____ or x 2 Motor revolution, l = _____
 RA = (Reference) switching point (B-side = Ra, further = SA, TA...)
 RA = _____ RS = _____
 without specification the following setting takes place: Central position, max. 1000 mm
 free cable length initiator slot installation: 0,2m 2m 3m >3m Connector box

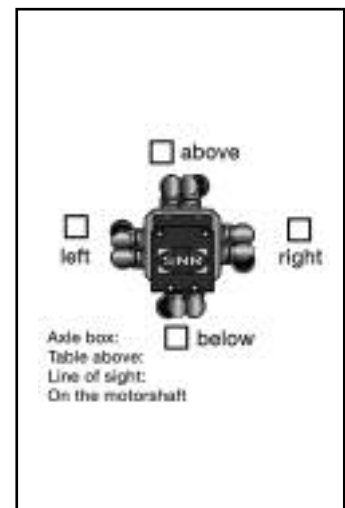
- mechanical limit switch
- IP30
- IP67
- inductive limit switch
- NC contact (standard)
- NO contact
- NO reference switch
- PNP (standard)
- NPN

Switch mounting



Mounting position angular gear

Installation position linear axis



Position motor connection

Notes





Notes

A large, empty rectangular area with a light yellow background, intended for taking notes.

