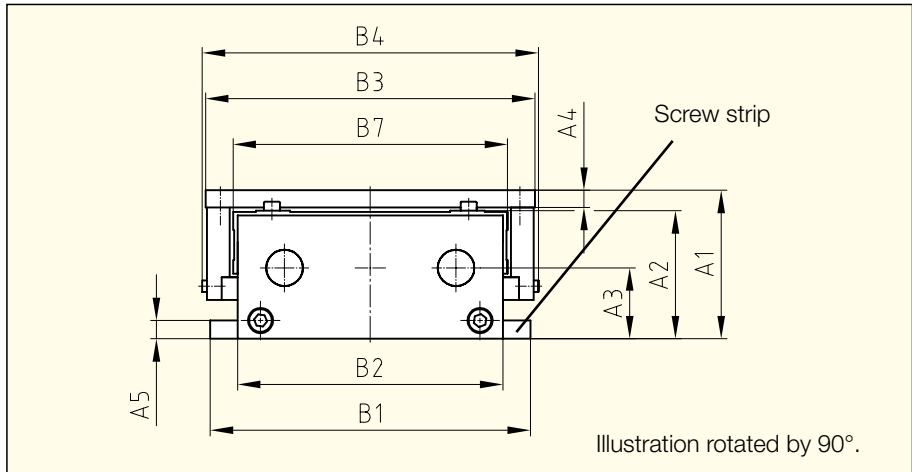
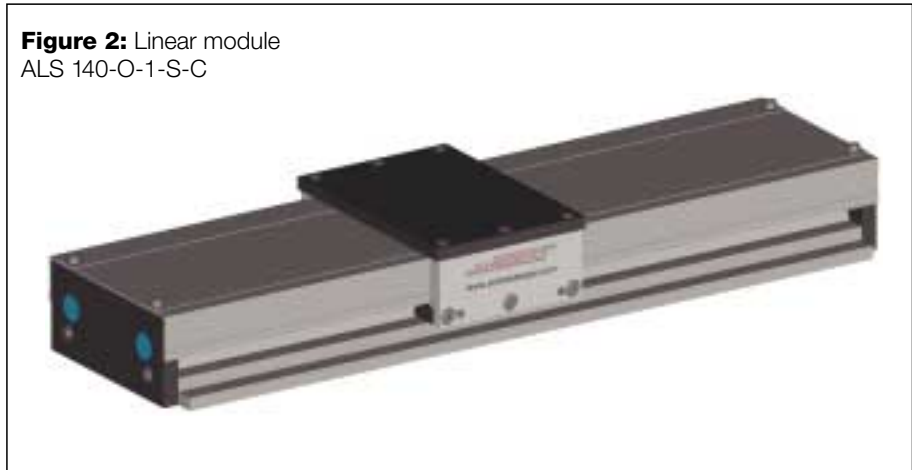


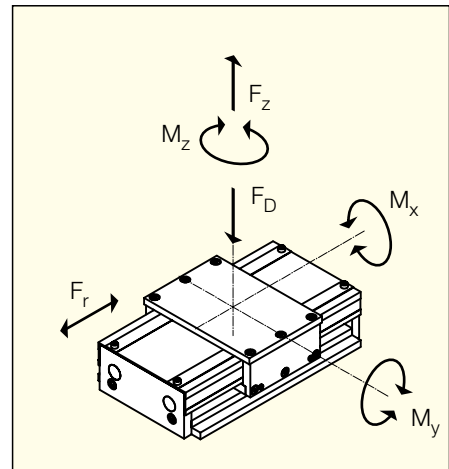
**5.1.1 Dimension Table**  
**Type ALS 140-O without Drive**

**Figure 2:** Linear module  
 ALS 140-O-1-S-C



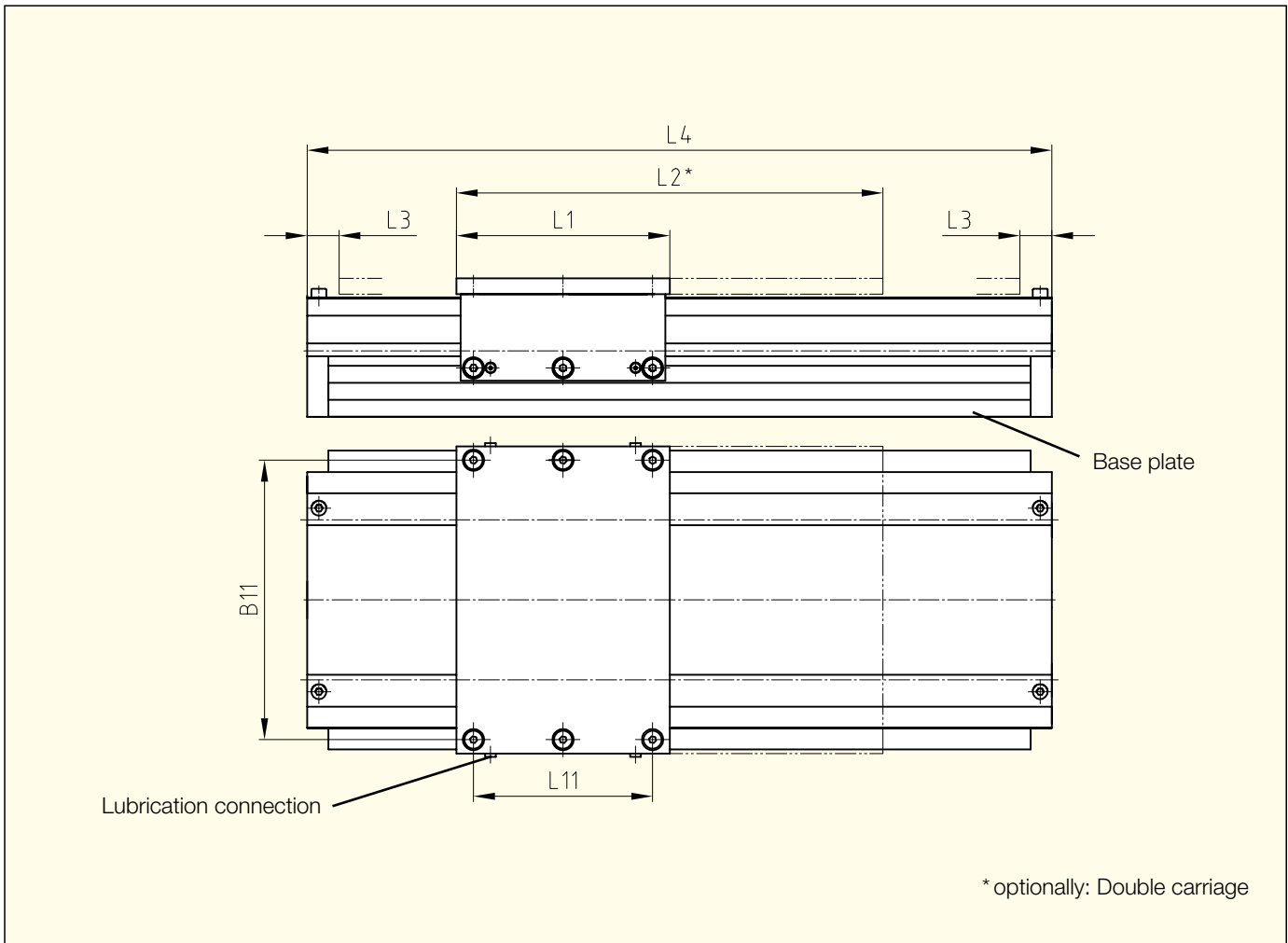
**Technical data**

		ALS 140-O	ALS 140-O-H
Max. permissible centr. compressive force $F_b$ per carr. (N)		2000	4000
Max. permissible centr. tensile force $F_z$ per carr. (N)		1300	2800
Dynamic load-bearing value C of the linear guideway* per carriage (N)		4200	8800
Permissible bending moment in case of full support		Single carr.**	Single carr.**
	$M_x$ (Nm)	47	94
	$M_y$ (Nm)	40	80
	$M_z$ (Nm)	40	80
Break-away force $F_r$ (with 1 carriage) (N)		15	15
Profile support recommended as from (mm)		500	500
Maximum stroke** (mm)		2500	2500
Installation position		any	any
Maximum travelling speed $v_{max}$ (m/s)		5	3



\* In the direction of the principal load

\*\* Values for double carriage are dependent on the carriage spacing



Standard stroke (mm)	Single carriage	100	150	200	250	300	400	500	600	800	1000
	Double carriage	–	50	100	150	200	300	400	500	700	900
Overall length	L4 (mm)	239	289	339	389	439	539	639	739	939	1139
Weight without table plate and motor (kg)	Single carriage	4.6	5.0	5.4	5.9	6.4	7.4	8.3	9.3	11.2	13.1

Special - and intermediate strokes available on request!

A1	A2	A3	A4	A5	B1	B2	B3	B4	B7	B11	L1	L2	L3	L11
65	56	31	7.5	8	140	116	144	147	120	131	100	200	15	84

All dimensions in mm. Subject to dimensional - and design modifications!

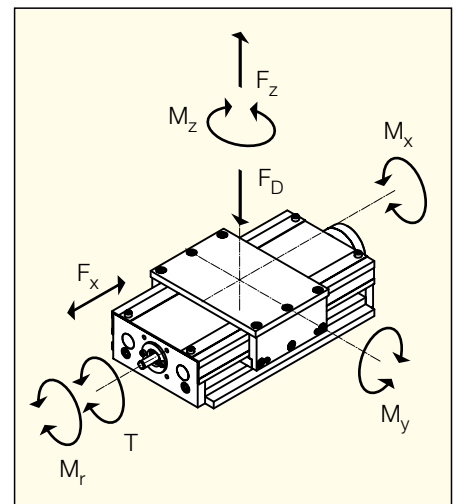
**5.1.2 Dimension Table  
Type ALS 140-S  
with Spindle Drive**

**Figure 3:** Linear module  
ALS 140-S-1-S-C-K12×5-M



**Technical Data**

		<b>ALS 140-S</b>	<b>ALS 140-S-H</b>
Max. perm. centr. compressive force $F_D$ per carr. (N)		2000	4000
Max. perm. centr. tensile force $F_z$ per carr. (N)		1300	2800
Dynamic load bearing value C of the linear guideway* per carriage (N)		4200	8800
Permissible bending moment with full support		Single carr.**	Single carr.**
	$M_x$ (Nm)	47	94
	$M_y$ (Nm)	40	80
	$M_z$ (Nm)	40	80
Max. perm. axial force $F_x$ of the spindle*** (N)		400	400
Maximum recommended load to be moved in case of great dynamism (N)		400	400
Static friction moment $M_r$ (with 1 carriage) (Ncm)		2	2
Profile support recommended as from (mm)		500	500
Maximum stroke** (mm)		1500	1500
Installation position		any	any



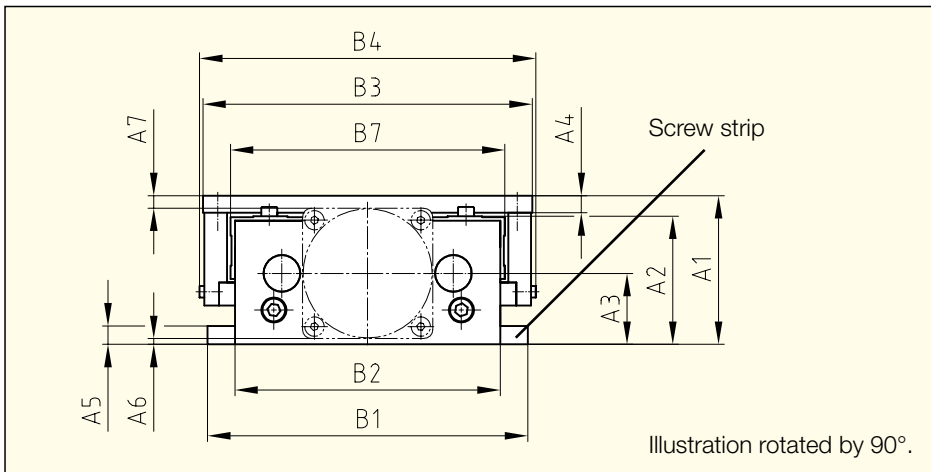
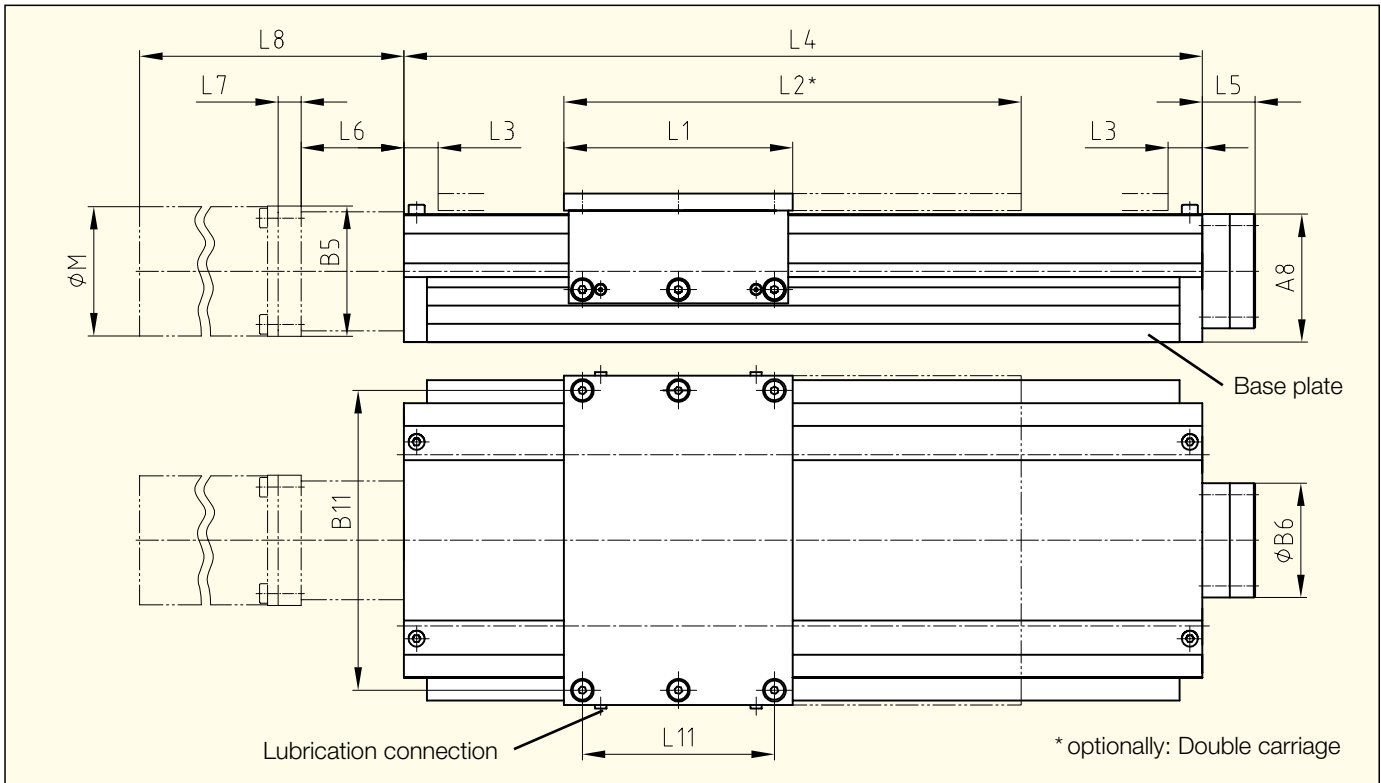
<b>Ball screw type</b>		<b>K12×5</b>	<b>K16×10</b>	<b>K16×16</b>	<b>K16×50</b>
Positioning accuracy**** (mm/m)		±0.05/0.3	±0.05/0.3	±0.1/0.3	±0.15/0.3
Repeatability**** (mm)		Approx. ±0.02	Approx. ±0.02	Approx. ±0.02	Approx. ±0.02
Lead error of the ballscrew: G50 (IT7) (mm/mm)		0.05/300	0.05/300	0.05/300	0.05/300
Feed per motor revolution without gearing (mm)		5	10	16	50
Max. travelling speed $v_{max}$ (m/s)		0.2	0.3	0.5	1.0
Max. motor shaft diameter (mm)		14	14	14	14
Max. drive torque T (Nm)		4	4	4	4

\* In the direction of the principal load

\*\* Values for double carriages are dependent on the carriage spacing

\*\*\* In case of standard bearing support

\*\*\*\* Dependent on the type of motor and spindle



Standard stroke (mm)	Single carriage	100	150	200	250	300	400	500	600	800	1000	1200
	Double carriages	-	50	100	150	200	300	400	500	700	900	1100
Overall length	L4 (mm)	239	289	339	389	439	539	639	739	939	1139	1339
Weight without table plate and motor (kg)	Single carriage	5.3	5.8	6.2	6.8	7.3	8.5	9.5	10.6	12.7	14.9	17.0

Special- and intermediate strokes available on request!

A1	A2	A3	A4	A5	A6	A7	A8	B1	B2	B3	B4	B5	B6
65	56	31	7.5	8	*	5.5	56	140	116	144	147	*	50

B7	B11	L1	L2	L3	L5	L6	L7	L8	L11	ØM
120	131	100	200	15	23	*	*	*	84	*

\* Dependent on the type of motor  
All dimensions in mm. Subject to dimensional- and design modifications!

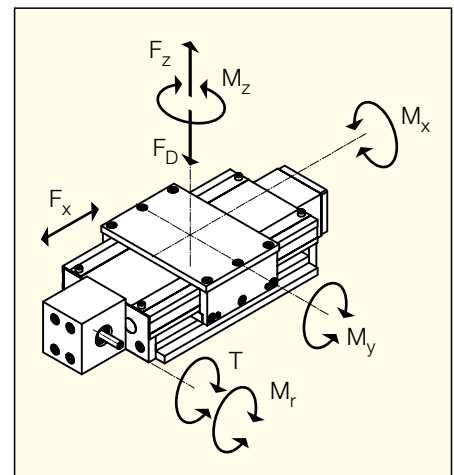
**5.1.3 Dimension Table  
Type ALS 140-B  
with Belt Drive**

**Figure 4:** Linear module  
ALS 140-B-1-S-C-16T5-M-R



**Technical Data**

		<b>ALS 140-B</b>	<b>ALS 140-B-H</b>
Max. perm. central compressive force $F_D$ per carr.	(N)	2000	4000
Max. perm. central tensile force $F_z$ per carr.	(N)	1300	2800
Dynamic load bearing value C of the linear guideway* per carriage	(N)	4200	8800
Permissible bending moment with full support		Single carr.**	Single carr.**
$M_x$	(Nm)	47	94
$M_y$	(Nm)	40	80
$M_z$	(Nm)	40	80
Static friction moment $M_f$ (with 1 carriage)	(Ncm)	15	15
Profile support recommended as from	(mm)	500	500
Maximum stroke**	(mm)	2500	2500
Installation position		any	any

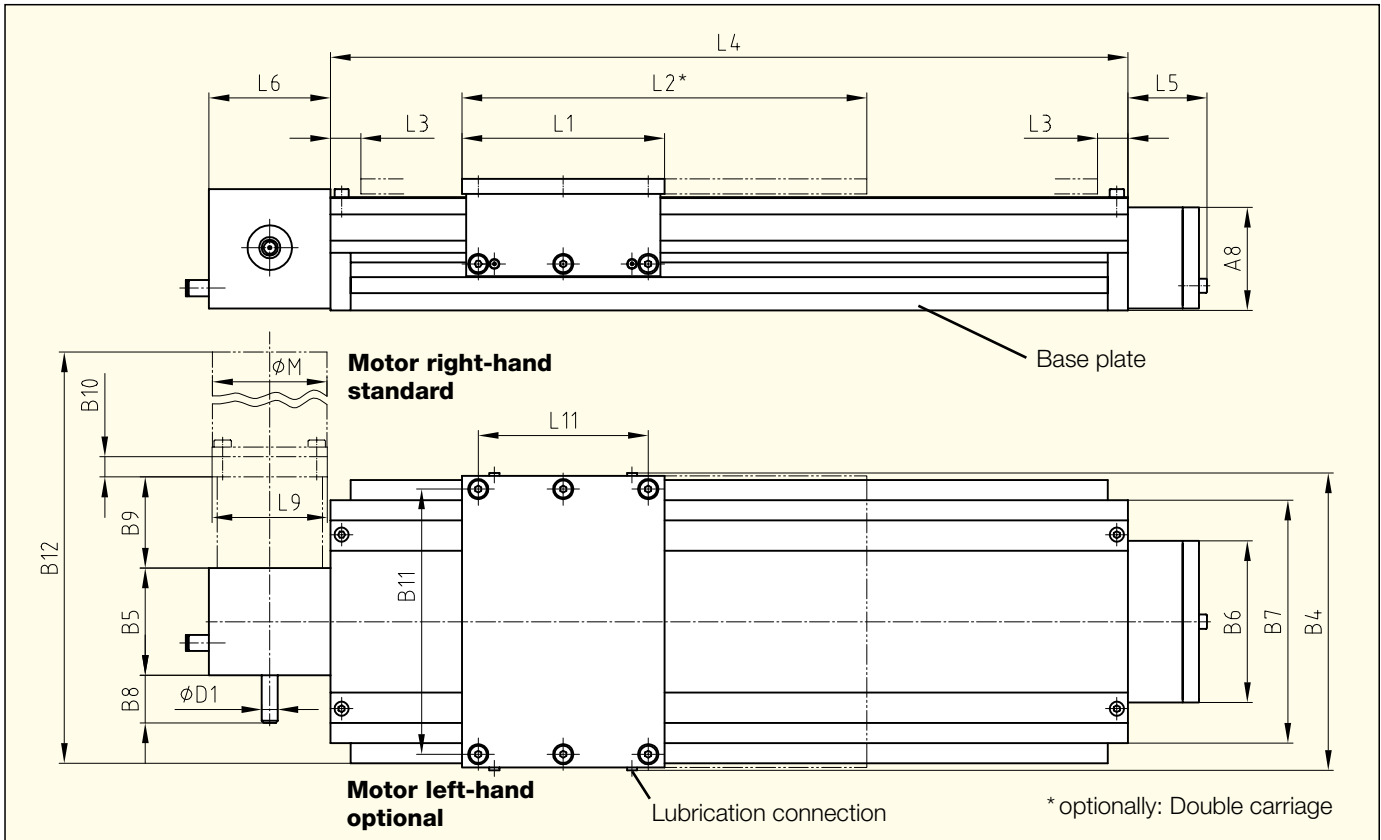


<b>Type of Belt</b>		<b>16T5</b>	<b>25T5</b>	<b>25AT5</b>
Max. perm. tensile force $F_x$ of the belt	(N)	400	600	1200
Max. recommended load to be moved in case of great dynamism	(N)	100	200	300
Positioning accuracy***	(mm/m)	$\pm 0.15/0.3$	$\pm 0.15/0.3$	$\pm 0.15/0.3$
Repeatability***	(mm)	ca. $\pm 0.03$	ca. $\pm 0.03$	ca. $\pm 0.03$
Feed per motor revolution without gearing	(mm)	50	60	105
Max. travelling speed $v_{max}$	(m/s)	1.0	1.5	2.0
Max. motor shaft diameter	(mm)	14	14	14
Max. drive torque T	(Nm)	2.5	4	8

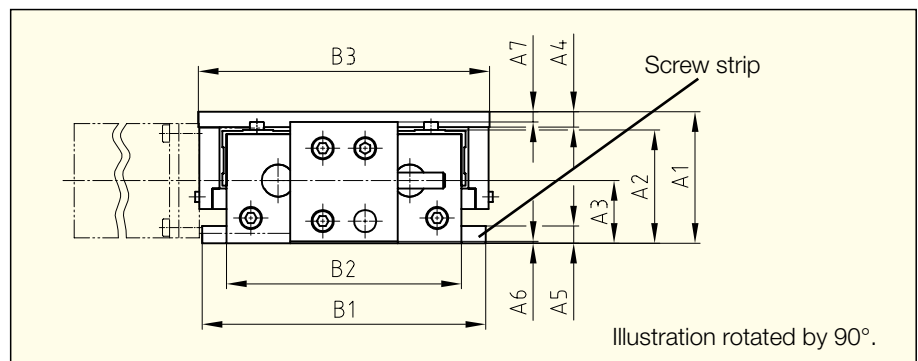
\* In the direction of the principal load

\*\* Values for double carriage are dependent on the carriage spacing

\*\*\* Dependent on the type of motor and belt



Type of belt	A6	A7	D1	B5	B8	L6
16T5	1	6	8	53	24	60
25T5	1	4	8	66	23	60
25AT5	0	7	10	68	28	74



Standard stroke (mm)	Single carriage	300	400	500	600	800	1000	1200	1500
	Double carriages	200	300	400	500	700	900	1100	1400
Overall length	L4 (mm)	439	539	639	739	939	1139	1339	1639
Weight without table plate and motor (kg)	Single carriage	6.7	7.5	8.3	9.1	10.8	12.5	14.2	16.8

Special - and intermediate strokes available on request!

A1	A2	A3	A4	A5	A8	B1	B2	B3	B4	B6	B7	B9	B10
65	56	31	7.5	8	51	140	116	144	147	80	120	*	*

B11	B12	L1	L2	L3	L5	L9	L11	ØM
131	*	100	200	15	39	*	84	*

\* Dependent on the type of motor  
All dimensions in mm. Subject to dimensional- and design modifications!

**5.1.4 Dimension Table  
Type ALS 140-P with  
Pneumatic Drive**

**Figure 5:** Linear module ALS 140-P-1-S-C

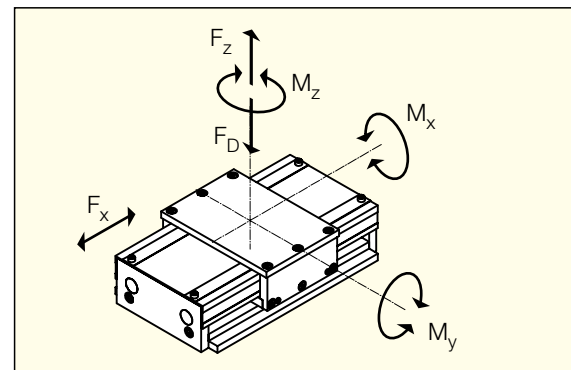
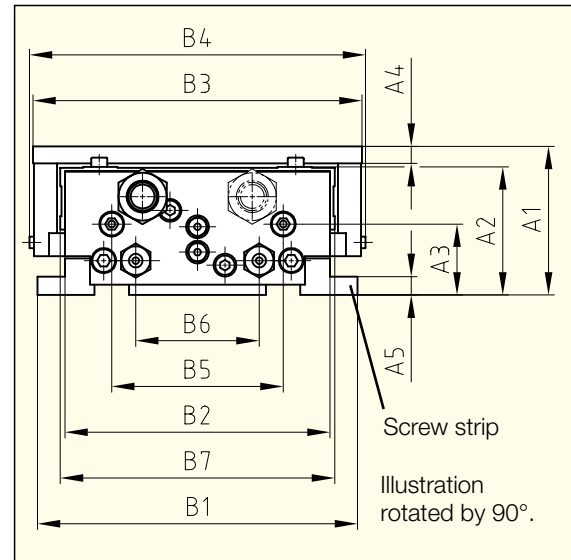


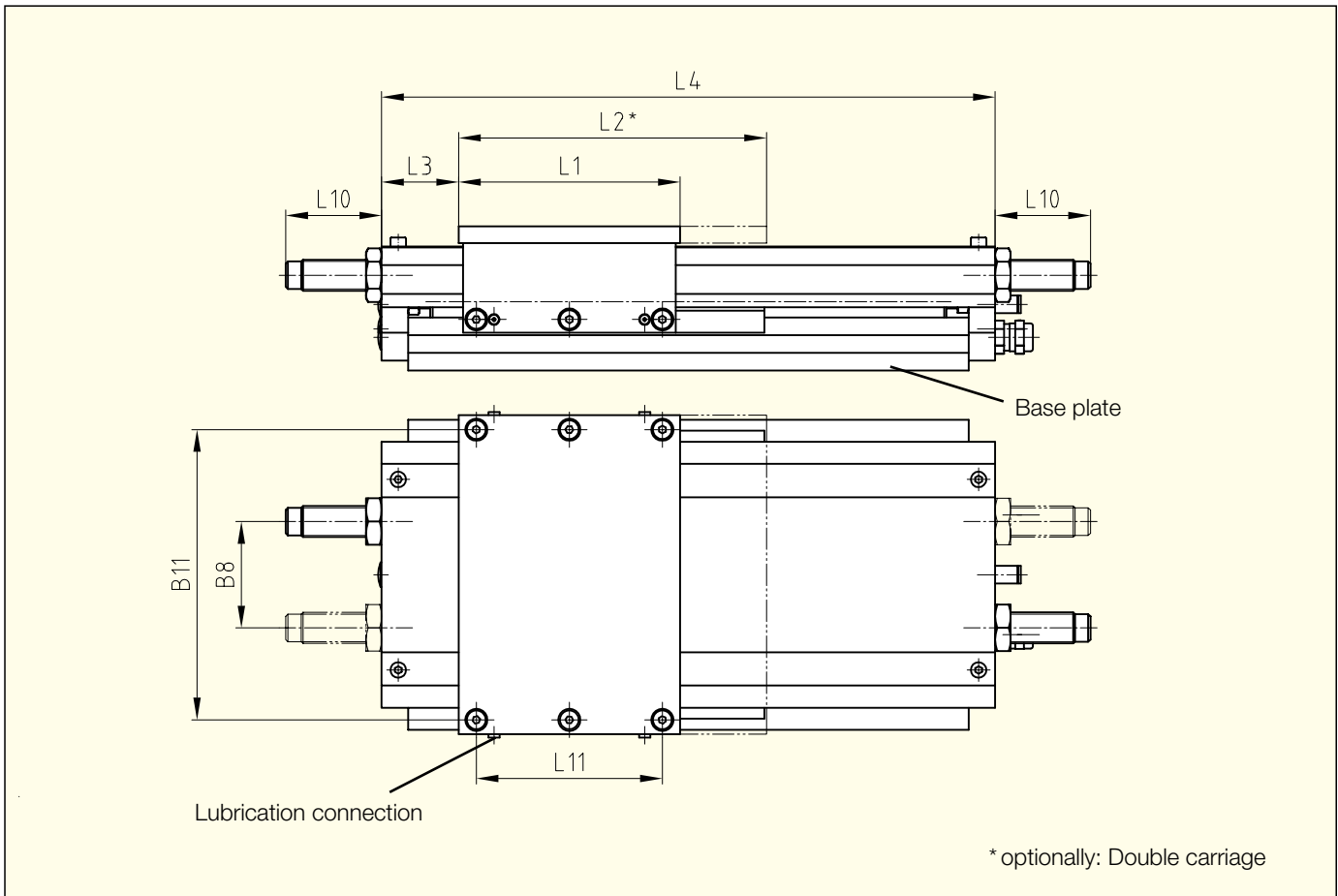
**Technical Data**

		<b>ALS 140-P</b>	<b>ALS 140-P-H</b>	
Max. perm. central compressive force $F_D$ per carr.	(N)	2000	4000	
Max. perm. central tensile force $F_z$ per carr.	(N)	1300	2800	
Dynamic load bearing value C of the linear guideway* per carriage	(N)	4200	8800	
Permissible bending moment with full support		Single carr.**	Single carr.**	
	$M_x$	(Nm)	47	94
	$M_y$	(Nm)	40	80
	$M_z$	(Nm)	40	80
Useful force $F_x$ of the cylinder 6bar	(N)	150	150	
Break-away force	Single carriage	(hPa (bar))	1300 (1.3)	1300 (1.3)
	Double carriage	(hPa (bar))	1500 (1.5)	1500 (1.5)
Maximum recommended load to be moved in case of great dynamism	(N)	50	50	
Profile support recommended as from	(mm)	500	500	
Maximum stroke**	Single Carriage	(mm)	1000	1000
	Double Carriage	(mm)	900	900
Installation position		any	any	
Positioning accuracy		To stop	To stop	
Adjustment of the limit position		up to 50 mm	up to 50 mm	

\* In direction of the principal load

\*\* Values for double carriages are dependent on the carriage spacing





Standard stroke (mm)	Single carriage	100	150	200	250	300	400	500	600	800	1000
	Double carriage	-	50	100	150	200	300	400	500	700	900
Overall length	L4 (mm)	230	280	330	380	430	530	630	730	930	1130
Weight without table plate and motor (kg)	Single carriage	5.4	5.9	6.4	6.9	7.4	8.4	9.4	10.4	12.4	14.4
	Double carriage	-	6.8	7.3	7.8	8.3	9.3	10.3	11.3	13.3	15.3

Special - and intermediate strokes available on request!

A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	B8	B11
65	56	31	7.5	8	140	116	144	147	75	80	120	48	131

L1	L2	L3	L10	L11
100	200	15	43	84

All dimensions in mm. Subject to dimensional- and design modifications!

## 5.2 Accessories – to be ordered separately

### 2nd carriage (double carriage) DW

To achieve significantly higher torque load-bearing capacity and the doubling of the load bearing capacity, a second carriage can be utilized. A correspondingly lengthened table plate is part of the scope of supply.  
The available stroke is reduced by 100mm.

### Reference-/limit switch PNP

The inductive switches are available both as normally closed PNP and normally open PNP (10 ... 30V). The free cable length is approx. 2m.

### Side covering SC

In case of rotated by 90° or 180° around the longitudinal axis installation (base plate on top), dirt may possibly penetrate inside through the gap. Depending on the amount of contamination, this side covering has to be foreseen.

### Coupling CP

Corresponding to the selected motor, a suitable coupling has to be chosen.

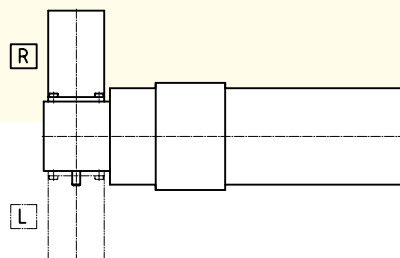
### Motor flange MF

The motor flange serves to adapt the motor to the coupling housing.

## 5.3 Ordering Information

### Linear module ALS

	—	ALS	140	-0500	-B	-1	-S	-C	-16T5	-O	-R
Quantity											
Type	<b>ALS</b>										
Size	<b>140</b>										
Stroke in mm											
Type of drive	<b>O</b>	Without drive									
	<b>S</b>	Ball screw drive									
	<b>B</b>	Belt drive									
	<b>P</b>	Pneumatic cylinder									
Number of carriages	<b>1</b>	Single carriage									
	<b>2</b>	Double carriages									
Bushing version	<b>S</b>	Standard									
	<b>H</b>	Increased load-bearing capacity									
Covering	<b>C</b>	Cover plate (standard)									
Type of drive (only in case of ball screw- or belt drive)	<b>K12×5, K16×10, K16×16*, K16×50*</b> in case of drive type S <b>16T5, 25T5, 25AT5</b> in case of drive type B										
Motor (only in case of ball screw- or belt drive)	<b>O</b>	Without motor or -adapter									
	<b>M</b>	With motor adapter or motor mounting (to be specified separately)									
Motor position (only in case of belt drive)	<b>R</b>	Motor/drive right-hand (standard)									
	<b>L</b>	Motor/drive left-hand									



\* Only available on request

**Accessories linear module 140** – to be ordered separately

**Reference-/limit switch**

		—	PNP	-O	-140
Quantity					
Designation	<b>PNP</b>				
Type	<b>O</b> Normally closed <b>S</b> Normally open				
Size	<b>140</b>				

**2<sup>nd</sup> (double carriage)**

		—	DW	-140
Quantity				
Designation	<b>DW</b>			
Size	<b>140</b>			

**Side covering**

		—	SC	-140	-639
Quantity					
Designation	<b>SC</b>				
Size	<b>140</b>				
Length L4 in mm					

**Coupling**

		—	CP	-140	-S
Quantity					
Designation	<b>CP</b>				
Size	<b>140</b>				
Type	<b>S</b> Special version (the motor has to be specified)				

**Motor flange**

		—	MF	-140	-S
Quantity					
Designation	<b>MF</b>				
Size	<b>140</b>				
Version	<b>S</b> Special version (the motor has to be specified)				

**Damper-kit (additional)**

		—	DP	-140	-P
Quantity					
Designation	<b>DP</b>				
Size	<b>140</b>				
Type	<b>P</b>				