

Superior Clamping and Gripping



Product Information

Universal linear module LM

LM

Universal linear module

Reliable. Precise. Modular.

LM universal linear module

With pneumatic drive and scope-free pretensioned crossed roller bearings, guided in prism rails

Field of application

For use in clean environments, such as assembly and testing systems. Optimal standard solution for high-precision applications.



Advantages – Your benefits

Closed slide construction for high rigidity

Shock absorbers and proximity switches integrated in the projecting surfaces For vibration-free movements and end position monitoring

Compact dimensions For minimum interfering contours of the entire system

Pretensioned junction rollers That means absolutely scope-free

High basic load ratings In all load directions

Several intermediate positions possible for maximum flexibility in applications

Standardized mounting bores for numerous combinations with other components from the modular system

Rod lock by means of clamping cartridge for safety in case of emergency stops



Sizes
Quantity: 5



Weight
0.44 .. 15.81 kg



Driving force
67 .. 753 N



Stroke
13 .. 450 mm

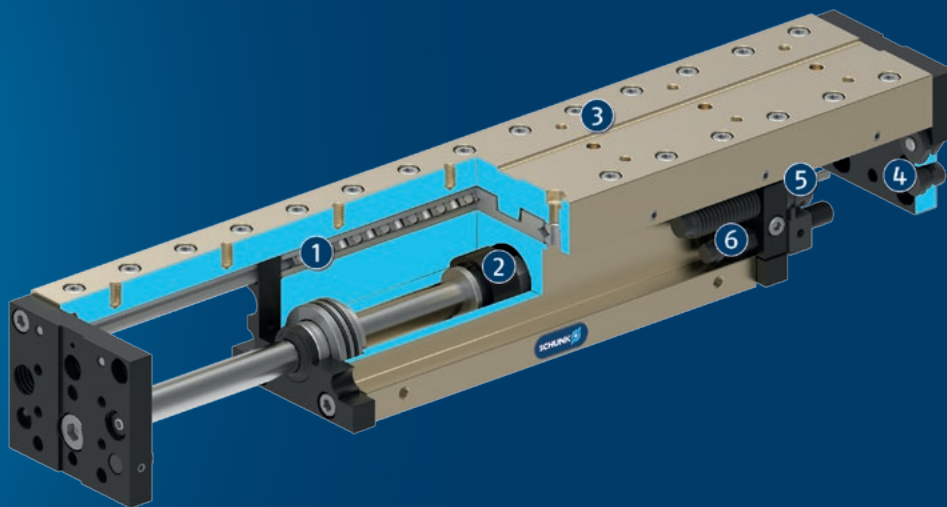


Repeat accuracy
0.01 .. 0.02 mm

Functional description

The slide is guided with pretensioned crossed rollers at the base body and driven with a double-acting pneumatic

cylinder which is integrated in the base body.



- ① **Cross roller guidance**
Pretensioned and scope-free
- ② **Drive**
Powerful piston rod cylinders
- ③ **Mounting pattern**
Completely integrated in the module system
- ④ **Damping adjustment**
Adjustment of the damping characteristics
- ⑤ **End position adjustability**
Convenient adjustment using the shock absorber threads
- ⑥ **Sensor system**
With sensor driver for convenient adjustment

CAD data, operating manuals and other current product documents can be found online.

General notes about the series

Housing material: Aluminum alloy, anodized

Guidance: Backlash-free, pre-loaded cross roller guide

Actuation: pneumatic, with filtered compressed air as per ISO 8573-1:2010 [7:4:4].

Scope of delivery: Shock absorber and driver for proximity switch

Warranty: 24 months

Repeat accuracy: is defined as the distribution of the end positions for 100 consecutive cycles.

Travel times: are pure movement times of the slide or the base body. Valve switching times, hose filling times, or PLC reaction times are not a part of this and are to be considered when cycle times are calculated.

Stroke: is the maximum nominal stroke of the unit. This can be shortened on both sides by the shock absorbers.

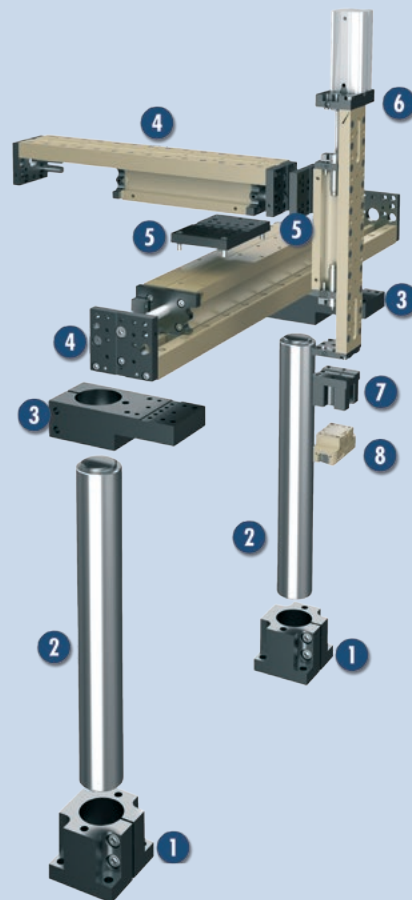
Layout or control calculation: For layout or sizing of the modules, we recommend using our software TOOLBOX, which can be downloaded online. Verifying the sizing of the selected unit is absolutely necessary, since otherwise overloading can result.

Ambient conditions: The modules are mainly designed for the use in clean ambient conditions. Please note that the life time of the modules can shorten if they are used in harsh ambient conditions, and that SCHUNK cannot assume liability in such cases. Please contact us for assistance.

Application example

Pneumatic three-axis handling unit with third vertical position and gripper.

- ① Single base support, SOE
- ② Hollow pillar, SLH
- ③ APEH single mounting plate
- ④ LM linear module
- ⑤ Adapter plate APL
- ⑥ Linear Modules with intermediate stop
- ⑦ ASG adapter
- ⑧ PGN-plus universal gripper



SCHUNK offers more ...

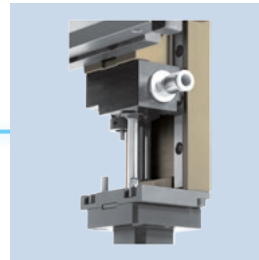
The following components make the product LM even more productive – the suitable addition for the highest functionality, flexibility, reliability, and controlled production.



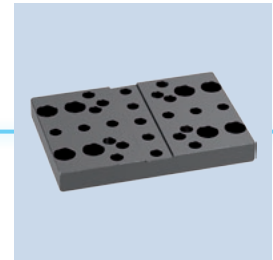
Intermediate stop, ZZA



LMZAW intermediate stop



Rod lock



Adapter plates



Pillar assembly system SAS



NI proximity switches



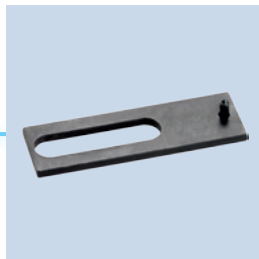
Sensor cables



Fittings



SDV-P pressure maintenance valve



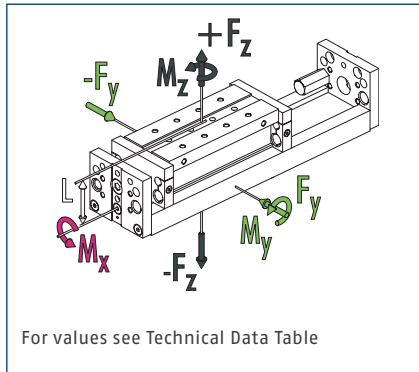
LMZL centering strip

① Additional information regarding the products can be found on the following product pages or at www.schunk.com. Please contact us for further information: SCHUNK technical hotline +49-7133-103-2696

Options and special information

Version rod lock: Prevents the structure from falling in the event of a sudden loss of energy. This module can be combined as standard with many elements from the modular system. We can assist you with questions.

Forces and moments

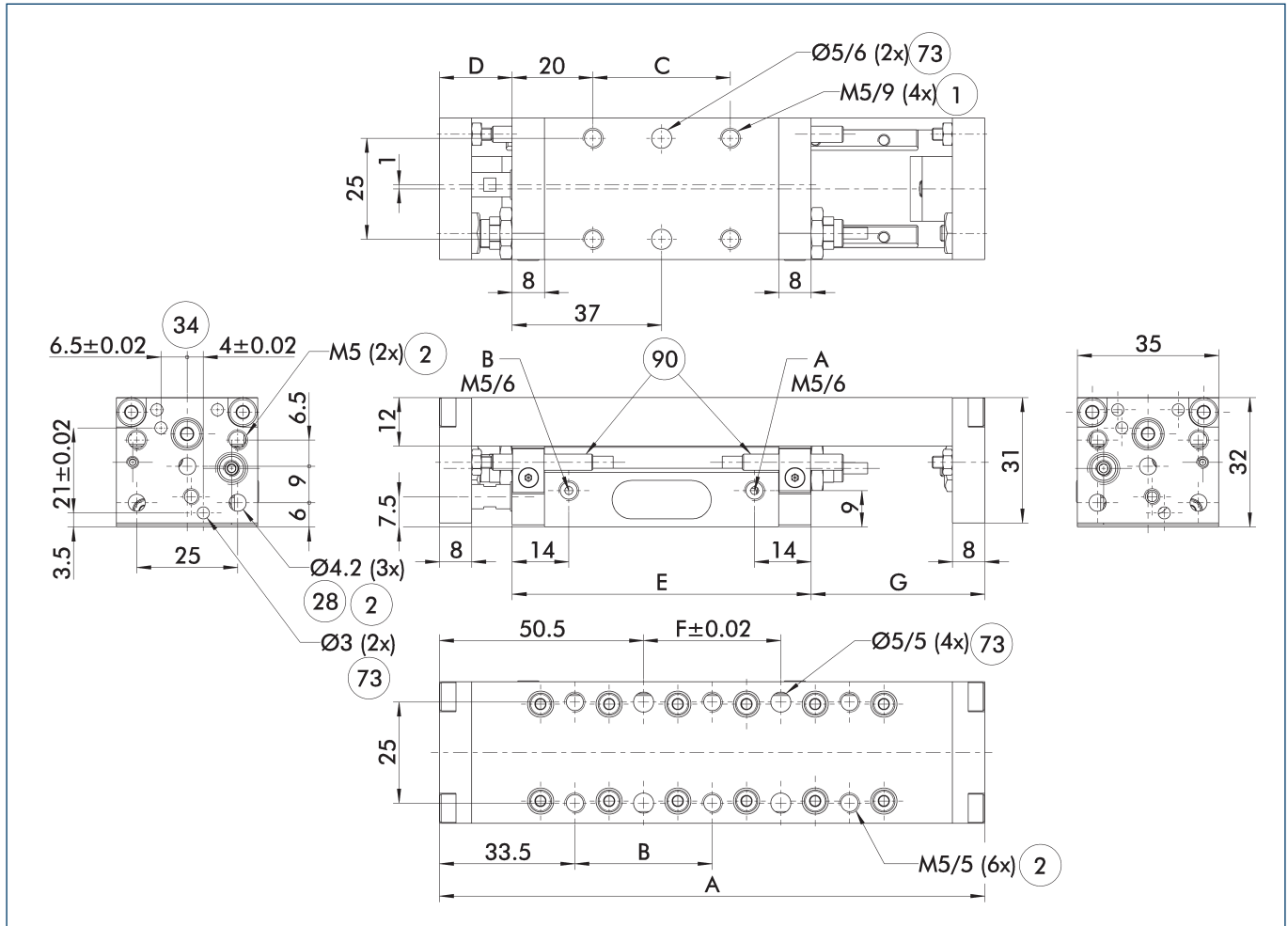


ⓘ The forces and moments shown here are maximum values for individual loading. If more than one force and / or moment occurs simultaneously, the case of application can be calculated by the TOOLBOX. The force F_y can just be calculated by the TOOLBOX.

Technical data

Description		LM 25-H025	LM 25-H042	LM 25-H059
ID		0314050	0314051	0314052
Stroke	[mm]	25	42	59
extend force	[N]	67	67	67
retracted force	[N]	50	50	50
Repeat accuracy	[mm]	0.01	0.01	0.01
Piston diameter	[mm]	12	12	12
Bar diameter	[mm]	6	6	6
Min./max. operating pressure	[bar]	3/8	3/8	3/8
Nominal operating pressure	[bar]	6	6	6
fluid consumption/10 mm stroke	[cm ³]	1.13	1.13	1.13
Overall length	[mm]	135	169	203
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60
Weight	[kg]	0.44	0.52	0.6
Drive concept		Piston rod cylinders	Piston rod cylinders	Piston rod cylinders
Length L	[mm]	23	23	23
Moments M_x max./ M_y max./ M_z max.	[Nm]	4.4/4.7/2.35	5.25/5.7/2.85	6.1/6.7/3.35
Forces F_z max.	[N]	348	322	305

Main view



The linear module can be fastened either to the base body or the slide. The structure can also optionally be fastened to either the slide or the base body. This view shows the mounting of the module to the base body and the mounting of the structure to the slide.

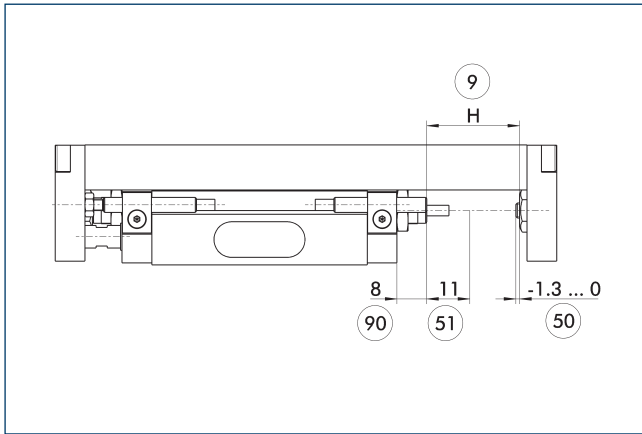
- A Main connection - linear unit extended
- B Main connection - linear unit retracted
- ① Connection linear unit
- ② Attachment connection
- ②⑧ Through-hole
- ③④ On both sides
- ⑦③ Fit for centering pins
- ⑨⑩ Inductive proximity switches

Description	A	B	Quantity B	C	Quantity C	D	E	F	Quantity F	G
	[mm]	[mm]		[mm]		[mm]	[mm]	[mm]		[mm]
LM 25-H025	135	34	2	34	1	18	74	34	1	43
LM 25-H042	169	34	3	34	1	18	91	34	2	60
LM 25-H059	203	34	4	34	2	18	108	34	3	77

LM 25

Universal linear module

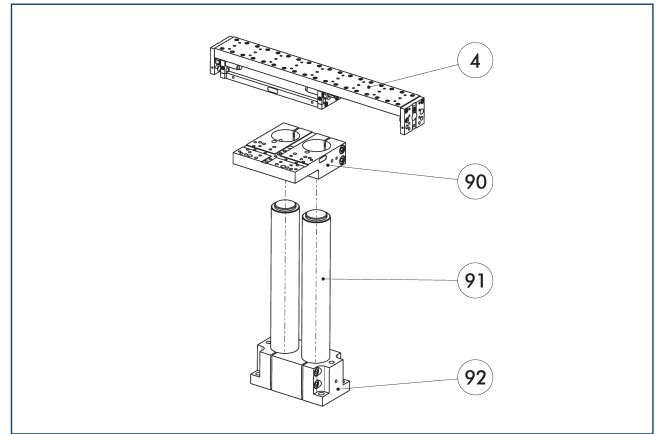
Fine adjustment



- ⑨ Nominal stroke
- ⑤① Stroke adjustment range
- ⑤② Damping stroke adjustment
- ⑨② This dimension may not drop below this minimum value.

This illustration shows the possible fine adjustment of the stroke.

Attachment to a pillar assembly system

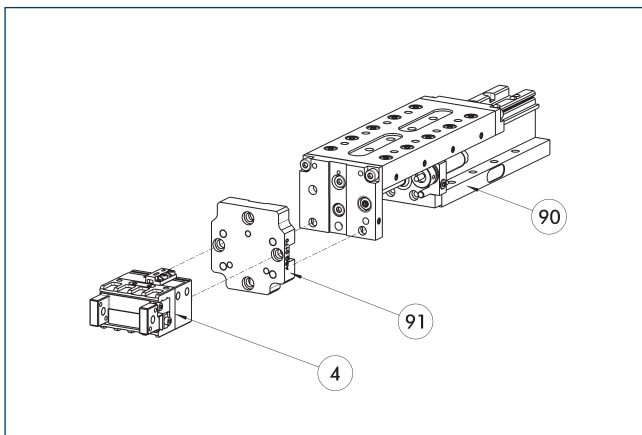


- ④ Linear unit
- ⑨② Double mounting plate, APDH
- ⑨① Pillars, hard-chromium plated, ground
- ⑨② Double socket, SOD

This unit can be attached to the pillar assembly system as standard. See the Kombibox software, which can be found online, for the right arrangement for your application.

Description	ID	pillar diameter [mm]	Material
Pillar assembly system mounting plates			
APDH 20	0313614	20	Aluminum
APDH 35	0313894	35	Aluminum
APDV 20	0313616	20	Aluminum
APDV 35	0313896	35	Aluminum
APEH 20	0313613	20	Aluminum
APEH 35	0313893	35	Aluminum
APEV 20	0313615	20	Aluminum
APEV 35	0313895	35	Aluminum

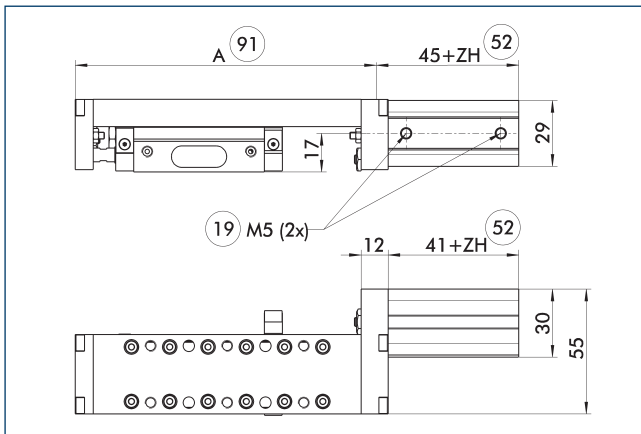
Modular Assembly Automation



- ④ Grippers
- ⑨① ASG adapter plate
- ⑨② CLM/KLM/LM/ELP/ELM/ELS/HLM linear modules

Grippers and linear modules can be combined with standard adapter plates from the modular assembly system. For more information see our main catalog "Modular Assembly Automation".

Intermediate stop, ZZA on the piston side



- ① 19 Air connection
- ② 52 Intermediate stroke
- ③ 91 Overall length "A," the variant without intermediate stroke (see measurement chart of stroke variants)

The intermediate position is measured from the respective end position. The intermediate position can be approached from both sides and can proceed in the original stroke direction. The holding force is the piston force of the intermediate stop less the piston force of the linear module.

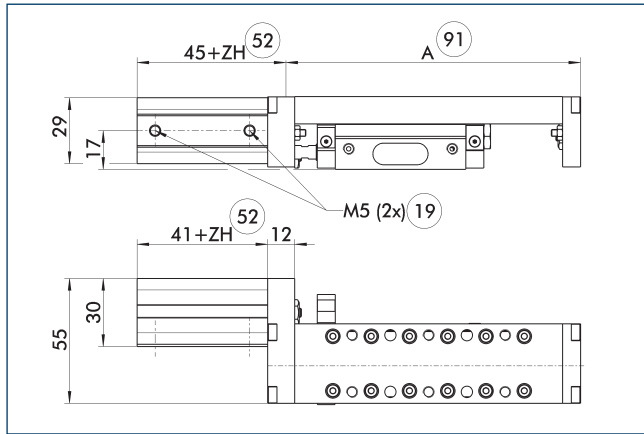
Description	Holding force	With with 0mm stroke	Weight per mm stroke
	[N]	[kg]	[kg]
Intermediate stop			
ZZA 26	54	0.2	0.002

④ Sample order LM 25-H059-ZZA026-H15

LM 25

Universal linear module

Intermediate stop, ZZA on the piston rod side



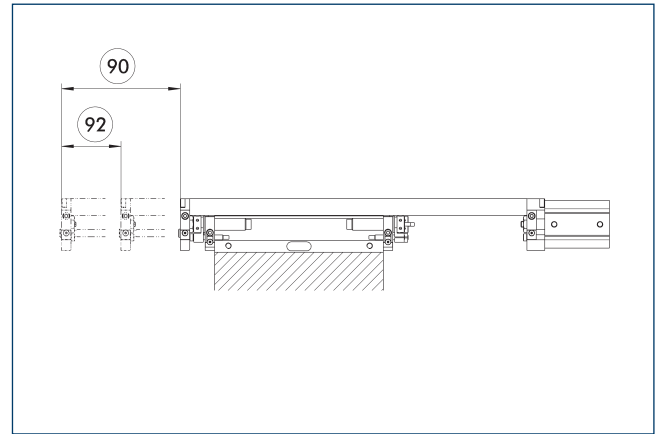
- ①⑨ Air connection
- ①⑤ Intermediate stroke
- ①⑨ Overall length "A," the variant without intermediate stroke (see measurement chart of stroke variants)

The intermediate position is measured from the respective end position. The intermediate position can be approached from both sides and can proceed in the original stroke direction. The holding force is the piston force of the intermediate stop less the piston force of the linear module.

Description	Holding force	With with 0mm stroke	Weight per mm stroke
	[N]	[kg]	[kg]
Intermediate stop			
ZZA 27	54	0.2	0.002

① Sample order LM 25-H059-ZZA027-H15

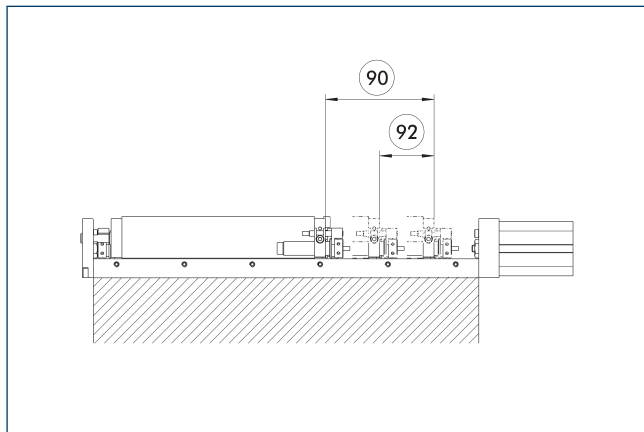
Design – variant 1



- ①⑨ Nominal stroke
- ①⑤ Intermediate stroke

The corresponding intermediate stroke (ZH) is calculated by subtracting the intermediate stop cylinder stroke from the nominal stroke of the module. The intermediate stroke adjustment is ± 3 mm.

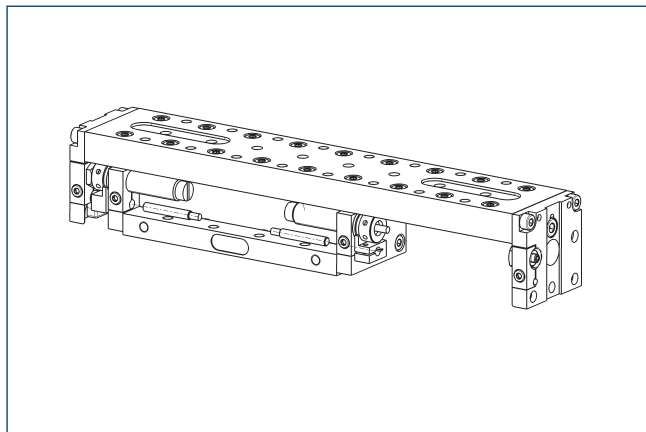
Design – variant 2



- ①⑨ Nominal stroke
- ①⑤ Intermediate stroke

The corresponding intermediate stroke (ZH) is calculated by subtracting the intermediate stop cylinder stroke from the nominal stroke of the module. The intermediate stroke adjustment is ± 3 mm.

Inductive Proximity Switches



Directly mounted end position monitoring.

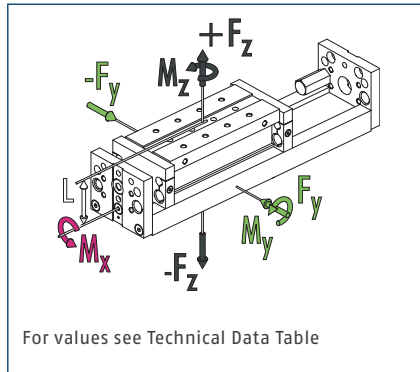
Description	ID	Often combined
Inductive Proximity Switches		
IN 40-S-M12	0301574	
IN 40-S-M8	0301474	●
INK 40-S	0301555	
Inductive proximity switch with lateral outlet		
IN 40-S-M12-SA	0301577	
IN 40-S-M8-SA	0301473	●
INK 40-S-SA	0301565	
Cable extension		
KV BG12-SG12 3P-0030-PNP	0301999	
KV BG12-SG12 3P-0060-PNP	0301998	
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
KV BW12-SG12 3P-0030-PNP	0301595	
KV BW12-SG12 3P-0100-PNP	0301596	
KV BW12-SG12 3P-0200-PNP	0301597	
clip for plug/socket		
CLI-M12	0301464	
CLI-M8	0301463	
Connection cables		
KA BG08-L 3P-0300-PNP	0301622	●
KA BG08-L 3P-0500-PNP	0301623	
KA BG12-L 3P-0500-PNP	30016369	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-PNP	0301502	
KA BW12-L 3P-0300-PNP	0301503	
KA BW12-L 3P-0500-PNP	0301507	
Sensor distributor		
V2-M12	0301776	●
V2-M8	0301775	●
V4-M12	0301747	
V4-M8	0301746	
V8-M12	0301752	
V8-M8	0301751	

- ① Two sensors (closer/S) are required for each unit and extension cables are available as an option. For sensor cables, note the minimum permissible bending radii. These are generally 35 mm.

LM 50

Universal linear module

Forces and moments



① The forces and moments shown here are maximum values for individual loading. If more than one force and / or moment occurs simultaneously, the case of application can be calculated by the TOOLBOX. The force F_y can just be calculated by the TOOLBOX.

Technical data

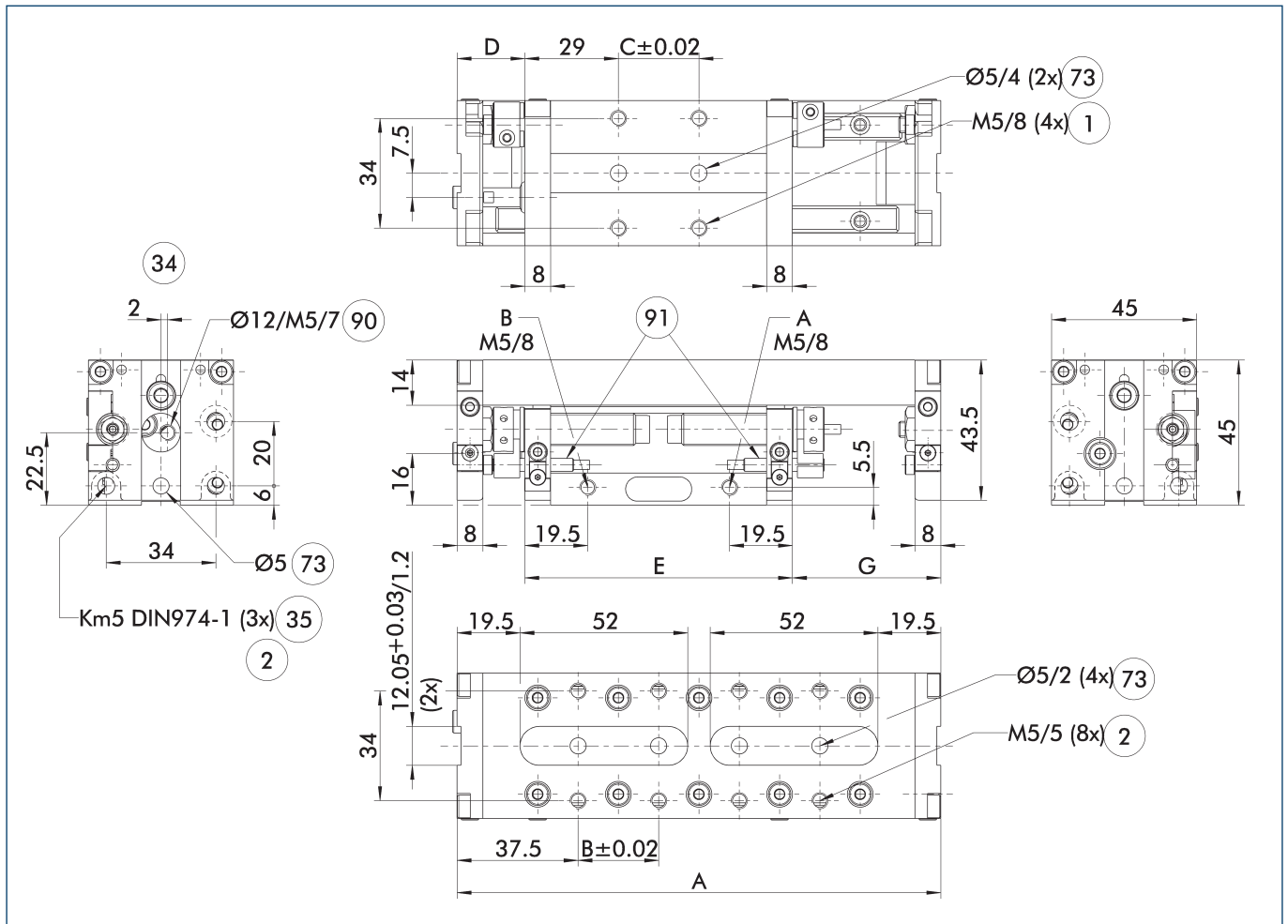
Description		LM 50-H013	LM 50-H025	LM 50-H038	LM 50-H050	LM 50-H063	LM 50-H075
ID		0314053	0314054	0314055	0314056	0314057	0314058
Stroke	[mm]	13	25	38	50	63	75
extend force	[N]	120	120	120	120	120	120
retracted force	[N]	103	103	103	103	103	103
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Piston diameter	[mm]	16	16	16	16	16	16
Bar diameter	[mm]	6	6	6	6	6	6
Min./max. operating pressure	[bar]	3/8	3/8	3/8	3/8	3/8	3/8
Nominal operating pressure	[bar]	6	6	6	6	6	6
fluid consumption/10 mm stroke	[cm ³]	2	2	2	2	2	2
Overall length	[mm]	150	150	200	200	250	250
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Weight	[kg]	0.88	0.88	1.06	1.06	1.24	1.24
Drive concept		Piston rod cylinders	Piston rod cylinders	Piston rod cylinders	Piston rod cylinders	Piston rod cylinders	Piston rod cylinders
Length L	[mm]	35	35	35	35	35	35
Moments M_x max./ M_y max./ M_z max.	[Nm]	10.5/11.6/5.8	10.5/11.6/5.8	13/15.1/7.55	13/15.1/7.55	15.5/18.6/9.3	15.5/18.6/9.3
Forces F_z max.	[N]	806	806	705	705	656	656
Options and their characteristics							
Rod lock version			LM 50-H025-ASP	LM 50-H038-ASP	LM 50-H050-ASP	LM 50-H063-ASP	LM 50-H075-ASP
ID			0314454	0314455	0314456	0314457	0314458
Stroke loss of nominal stroke (on the rod side)	[mm]		10	10	10	10	10
Weight	[kg]		0.91	1.09	1.09	1.27	1.27
static holding force	[N]		180	180	180	180	180
Max. axial play of the clamping	[mm]		0.2	0.2	0.2	0.2	0.2
Min. release pressure	[bar]		3	3	3	3	3

Description		LM 50-H088	LM 50-H100
ID		0314059	0314060
Stroke	[mm]	88	100
extend force	[N]	120	120
retracted force	[N]	103	103
Repeat accuracy	[mm]	0.02	0.02
Piston diameter	[mm]	16	16
Bar diameter	[mm]	6	6
Min./max. operating pressure	[bar]	3/8	3/8
Nominal operating pressure	[bar]	6	6
fluid consumption/10 mm stroke	[cm ³]	2	2
Overall length	[mm]	300	300
Protection class IP		40	40
Min./max. ambient temperature	[°C]	5/60	5/60
Weight	[kg]	1.42	1.42
Drive concept		Piston rod cylinders	Piston rod cylinders
Length L	[mm]	35	35
Moments M_x max./ M_y max./ M_z max.	[Nm]	18/22/11	18/22/11
Forces F_z max.	[N]	627	627
Options and their characteristics			
Rod lock version		LM 50-H088-ASP	LM 50-H100-ASP
ID		0314459	0314460
Stroke loss of nominal stroke (on the rod side)	[mm]	10	10
Weight	[kg]	1.45	1.45
static holding force	[N]	180	180
Max. axial play of the clamping	[mm]	0.2	0.2
Min. release pressure	[bar]	3	3

LM 50

Universal linear module

Main view

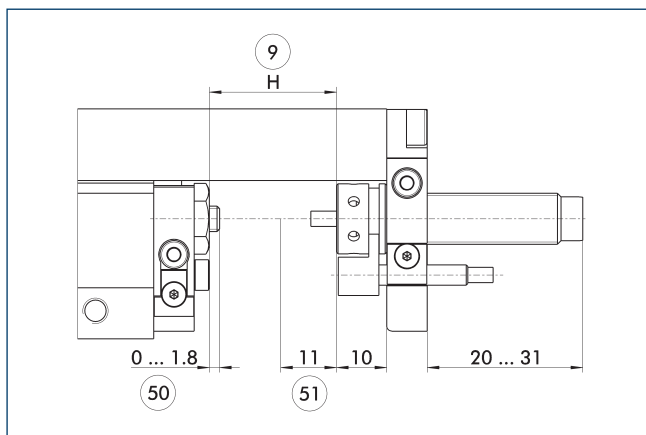


The linear module can be fastened either to the base body or the slide. The structure can also optionally be fastened to either the slide or the base body. This view shows the mounting of the module to the base body and the mounting of the structure to the slide.

- A Main connection - linear unit extended
- B Main connection - linear unit retracted
- ① Connection linear unit
- ② Attachment connection
- ③④ On both sides
- ③⑤ Back side
- ⑦③ Fit for centering pins
- ⑨⑩ Through-holes in the face plate and thread in the base body (only single sided)
- ⑨① Inductive proximity switches

Description	A [mm]	B [mm]	Quantity B	C [mm]	Quantity C	D [mm]	E [mm]	G [mm]
LM 50-H013	150	25	3	25	1	21	83	46
LM 50-H025	150	25	3	25	1	21	83	46
LM 50-H038	200	25	5	25	2	21	108	71
LM 50-H050	200	25	5	25	2	21	108	71
LM 50-H063	250	25	7	25	3	21	133	96
LM 50-H075	250	25	7	25	3	21	133	96
LM 50-H088	300	25	9	25	4	21	158	121
LM 50-H100	300	25	9	25	4	21	158	121

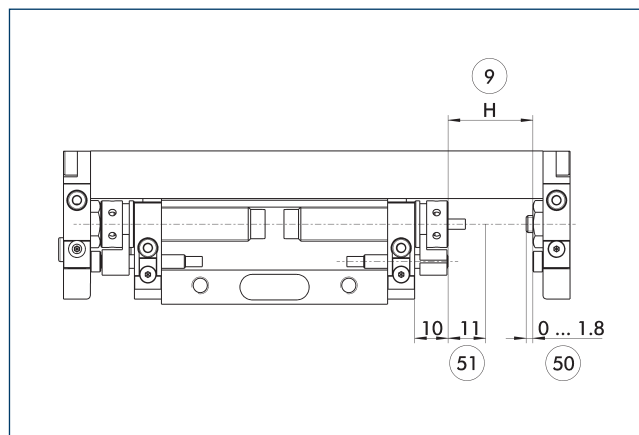
Fine adjustment



- ⑨ Nominal stroke
- ⑤① Stroke adjustment range
- ⑤① Damping stroke adjustment range

Shock absorbers can be mounted either on the base body or on the slide. This illustration shows the mounting on the slide and the possibility of stroke fine adjustment.

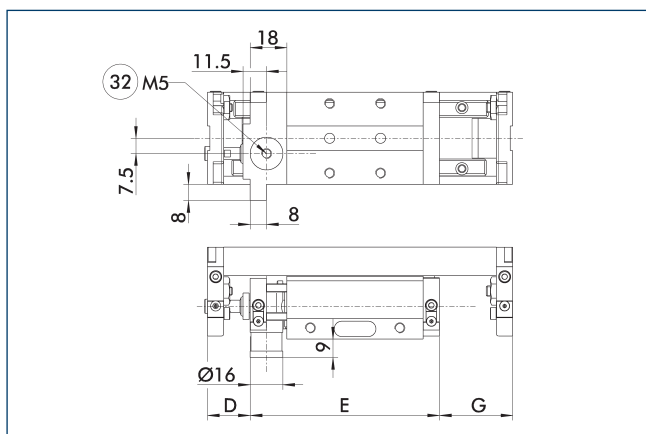
Fine adjustment



- ⑨ Nominal stroke
- ⑤① Stroke adjustment range
- ⑤① Damping stroke adjustment range

Shock absorbers can be mounted either on the base body or on the slide. This illustration shows the mounting on the base body and the possibility of stroke fine adjustment.

Rod lock

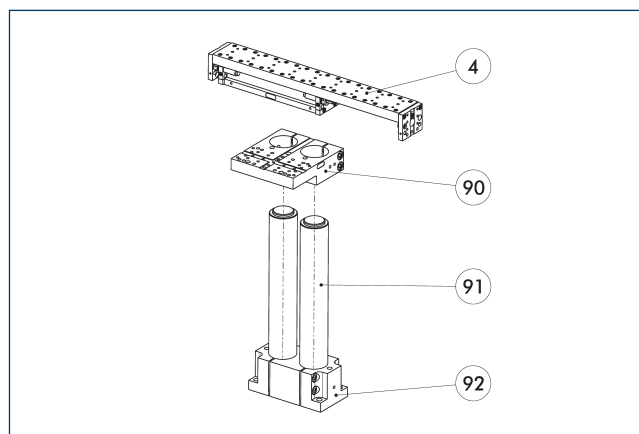


- ③② Pneumatic connection for holding brake

The rod lock prevents weights from falling in the event of energy loss, such as emergency stop situations. The rod lock can also be retrofitted, but this will reduce the nominal stroke.

Description	D	E	G
	[mm]	[mm]	[mm]
LM 50-H025-ASP	21	93	36
LM 50-H038-ASP	21	118	61
LM 50-H050-ASP	21	118	61
LM 50-H063-ASP	21	143	86
LM 50-H075-ASP	21	143	86
LM 50-H088-ASP	21	168	111
LM 50-H100-ASP	21	168	111

Attachment to a pillar assembly system

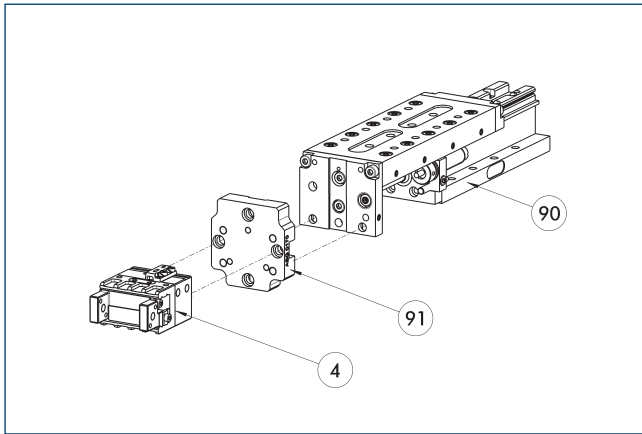


- ④ Linear unit
- ⑨① Pillars, hard-chromium plated, ground
- ⑨① Double mounting plate, APDH
- ⑨② Double socket, SOD

This unit can be attached to the pillar assembly system as standard. See the Kombibox software, which can be found online, for the right arrangement for your application.

Description	ID	pillar diameter	Material
		[mm]	
Pillar assembly system media feed-through			
SPL 50	0313692		
Pillar assembly system mounting plates			
APDH 85	0313414	55	Aluminum
APDV 35	0313896	35	Aluminum
APDV 85	0313416	55	Aluminum
APEH 35	0313893	35	Aluminum
APEH 85	0313413	55	Aluminum
APEV 35	0313895	35	Aluminum
APEV 85	0313415	55	Aluminum

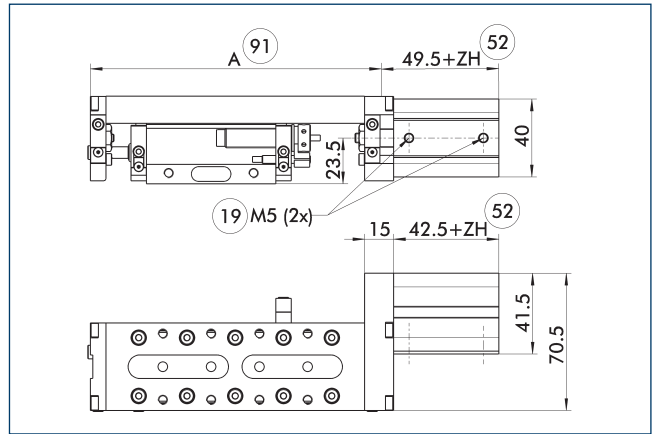
Modular Assembly Automation



- ④ Grippers
- ⑨① ASG adapter plate
- ⑨① CLM/KLM/LM/ELP/ELM/ELS/HLM linear modules

Grippers and linear modules can be combined with standard adapter plates from the modular assembly system. For more information see our main catalog "Modular Assembly Automation".

Intermediate stop, ZZA on the piston side



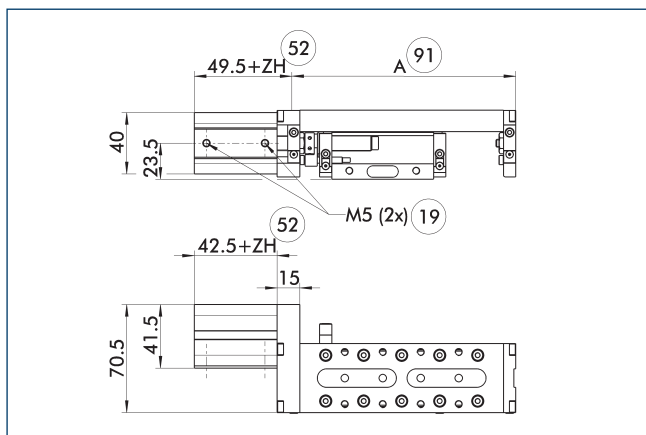
- ①⑨ Air connection
- ⑤② Intermediate stroke
- ⑨① Overall length "A," the variant without intermediate stroke (see measurement chart of stroke variants)

The intermediate position is measured from the respective end position. The intermediate position can be approached from both sides and can proceed in the original stroke direction. The holding force is the piston force of the intermediate stop less the piston force of the linear module.

Description	Holding force	With with 0mm stroke	Weight per mm stroke
	[N]	[kg]	[kg]
Intermediate stop			
ZZA 51	175	0.35	0.003

① Sample order LM 50-H100-ZZA051-H30

Intermediate stop, ZZA on the piston rod side



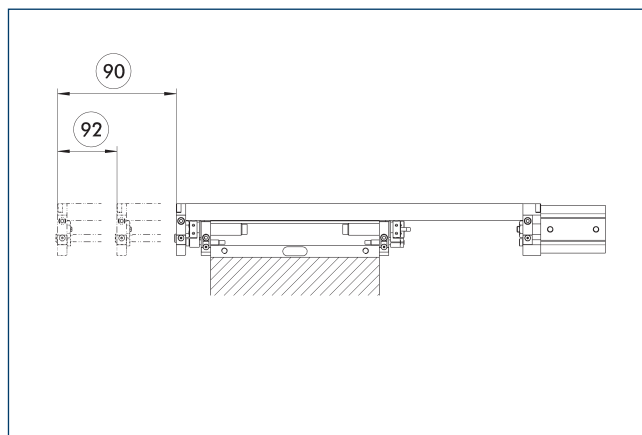
- ①⑨ Air connection
- ①⑤ Intermediate stroke
- ①⑨ Overall length "A," the variant without intermediate stroke (see measurement chart of stroke variants)

The intermediate position is measured from the respective end position. The intermediate position can be approached from both sides and can proceed in the original stroke direction. The holding force is the piston force of the intermediate stop less the piston force of the linear module.

Description	Holding force	With with 0mm stroke	Weight per mm stroke
	[N]	[kg]	[kg]
Intermediate stop			
ZZA 52	175	0.35	0.003

① Sample order LM 50-H100-ZZA052-H30

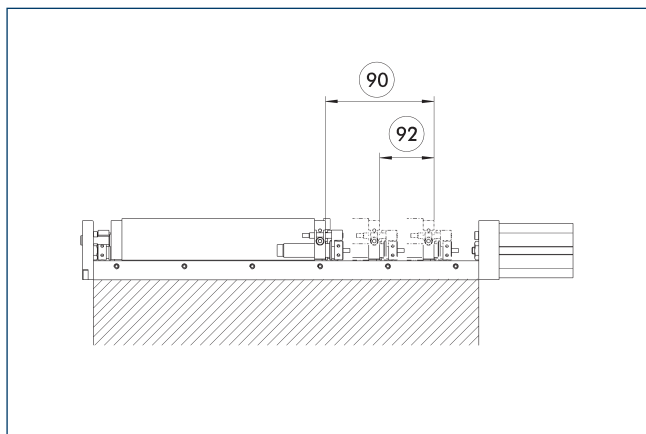
Design – variant 1



- ①⑨ Nominal stroke
- ①⑤ Intermediate stroke

The corresponding intermediate stroke (ZH) is calculated by subtracting the intermediate stop cylinder stroke from the nominal stroke of the module. The intermediate stroke adjustment is ± 3 mm.

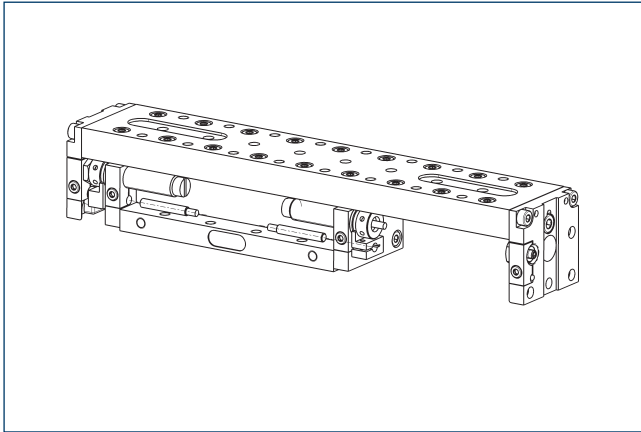
Design – variant 2



- ①⑨ Nominal stroke
- ①⑤ Intermediate stroke

The corresponding intermediate stroke (ZH) is calculated by subtracting the intermediate stop cylinder stroke from the nominal stroke of the module. The intermediate stroke adjustment is ± 3 mm.

Inductive Proximity Switches



Directly mounted end position monitoring.

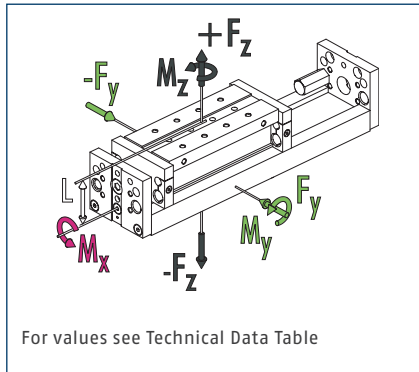
Description	ID	Often combined
Inductive Proximity Switches		
IN 40-S-M12	0301574	
IN 40-S-M8	0301474	●
INK 40-S	0301555	
Inductive proximity switch with lateral outlet		
IN 40-S-M12-SA	0301577	
IN 40-S-M8-SA	0301473	●
INK 40-S-SA	0301565	
Cable extension		
KV BG12-SG12 3P-0030-PNP	0301999	
KV BG12-SG12 3P-0060-PNP	0301998	
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
KV BW12-SG12 3P-0030-PNP	0301595	
KV BW12-SG12 3P-0100-PNP	0301596	
KV BW12-SG12 3P-0200-PNP	0301597	
clip for plug/socket		
CLI-M12	0301464	
CLI-M8	0301463	
Connection cables		
KA BG08-L 3P-0300-PNP	0301622	●
KA BG08-L 3P-0500-PNP	0301623	
KA BG12-L 3P-0500-PNP	30016369	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-PNP	0301502	
KA BW12-L 3P-0300-PNP	0301503	
KA BW12-L 3P-0500-PNP	0301507	
Sensor distributor		
V2-M12	0301776	●
V2-M8	0301775	●
V4-M12	0301747	
V4-M8	0301746	
V8-M12	0301752	
V8-M8	0301751	

- ① Two sensors (closer/S) are required for each unit and extension cables are available as an option. For sensor cables, note the minimum permissible bending radii. These are generally 35 mm.

LM 100

Universal linear module

Forces and moments



ⓘ The forces and moments shown here are maximum values for individual loading. If more than one force and / or moment occurs simultaneously, the case of application can be calculated by the TOOLBOX. The force F_y can just be calculated by the TOOLBOX.

Technical data

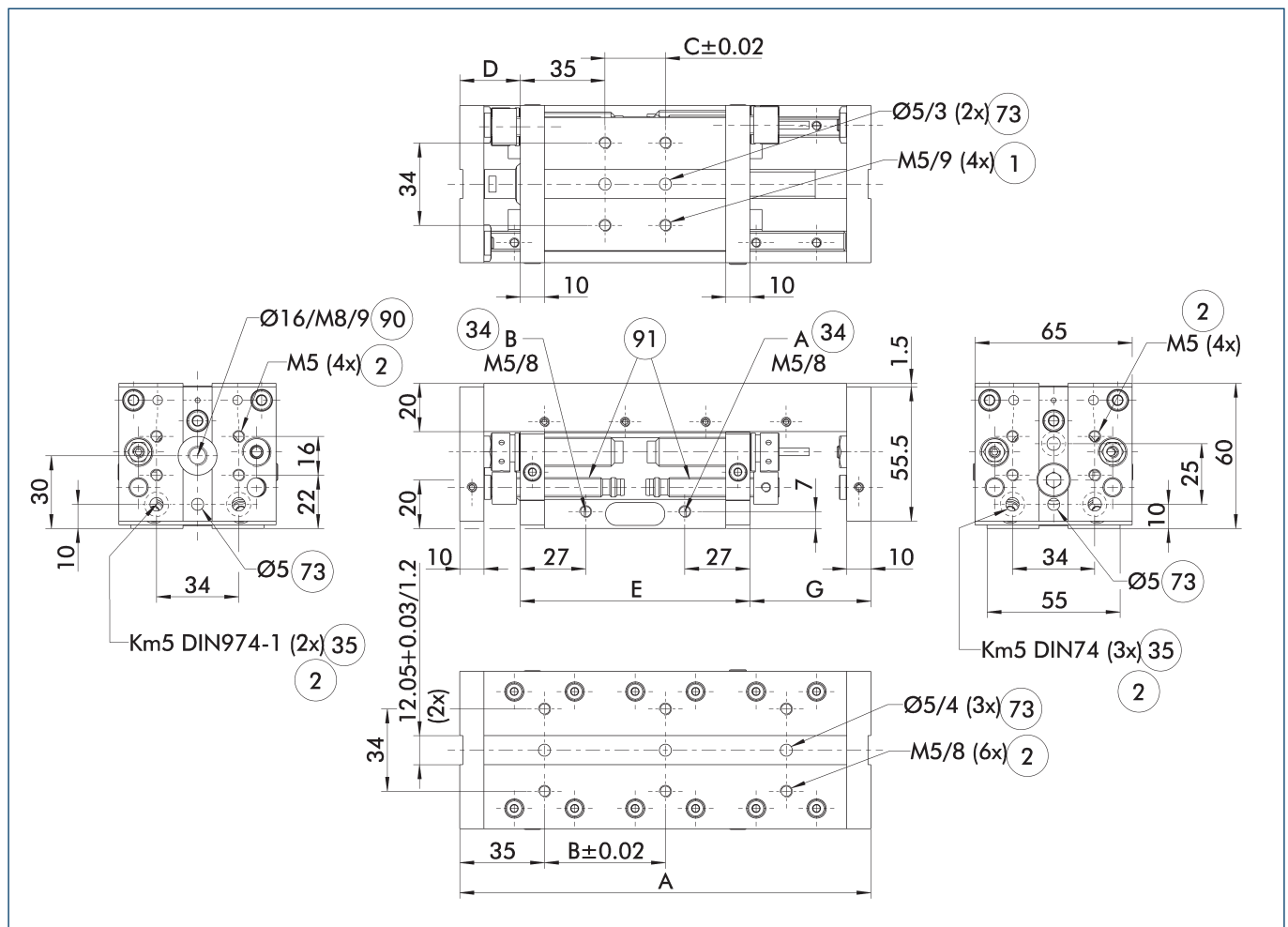
Description		LM 100-H025	LM 100-H050	LM 100-H075	LM 100-H100	LM 100-H125	LM 100-H150
ID		0314061	0314062	0314063	0314064	0314065	0314066
Stroke	[mm]	25	50	75	100	125	150
extend force	[N]	294	294	294	294	294	294
retracted force	[N]	226	226	226	226	226	226
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Piston diameter	[mm]	25	25	25	25	25	25
Bar diameter	[mm]	12	12	12	12	12	12
Min./max. operating pressure	[bar]	3/8	3/8	3/8	3/8	3/8	3/8
Nominal operating pressure	[bar]	6	6	6	6	6	6
fluid consumption/10 mm stroke	[cm ³]	4.9	4.9	4.9	4.9	4.9	4.9
Overall length	[mm]	170	270	270	370	370	470
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Weight	[kg]	1.9	2.6	2.6	3.3	3.3	4
Drive concept		Piston rod cylinders	Piston rod cylinders	Piston rod cylinders	Piston rod cylinders	Piston rod cylinders	Piston rod cylinders
Length L	[mm]	44	44	44	44	44	44
Moments M_x max./ M_y max./ M_z max.	[Nm]	36/29.8/14.9	50/43/21.5	50/43/21.5	64/56.3/28.15	64/56.3/28.15	78/69.5/34.75
Forces F_z max.	[N]	1570	1352	1352	1264	1264	1216
Options and their characteristics							
Rod lock version		LM 100-H025-ASP	LM 100-H050-ASP	LM 100-H075-ASP	LM 100-H100-ASP	LM 100-H125-ASP	LM 100-H150-ASP
ID		0314461	0314462	0314463	0314464	0314465	0314466
Stroke loss of nominal stroke (on the rod side)	[mm]	12	12	12	12	12	12
Weight	[kg]	1.98	2.68	2.68	3.38	3.38	4.08
static holding force	[N]	600	600	600	600	600	600
Max. axial play of the clamping	[mm]	0.25	0.25	0.25	0.25	0.25	0.25
Min. release pressure	[bar]	3	3	3	3	3	3

Description		LM 100-H175	LM 100-H200	LM 100-H225
ID		0314067	0314068	0314069
Stroke	[mm]	175	200	225
extend force	[N]	294	294	294
retracted force	[N]	226	226	226
Repeat accuracy	[mm]	0.02	0.02	0.02
Piston diameter	[mm]	25	25	25
Bar diameter	[mm]	12	12	12
Min./max. operating pressure	[bar]	3/8	3/8	3/8
Nominal operating pressure	[bar]	6	6	6
fluid consumption/10 mm stroke	[cm ³]	4.9	4.9	4.9
Overall length	[mm]	470	570	570
Protection class IP		40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60
Weight	[kg]	4	4.7	4.7
Drive concept		Piston rod cylinders	Piston rod cylinders	Piston rod cylinders
Length L	[mm]	44	44	44
Moments M_x max./ M_y max./ M_z max.	[Nm]	78/69.5/34.75	92/82.8/41.4	92/82.8/41.4
Forces F_z max.	[N]	1216	1187	1187
Options and their characteristics				
Rod lock version		LM 100-H175-ASP	LM 100-H200-ASP	LM 100-H225-ASP
ID		0314467	0314468	0314469
Stroke loss of nominal stroke (on the rod side)	[mm]	12	12	12
Weight	[kg]	4.08	4.78	4.78
static holding force	[N]	600	600	600
Max. axial play of the clamping	[mm]	0.25	0.25	0.25
Min. release pressure	[bar]	3	3	3

LM 100

Universal linear module

Main view

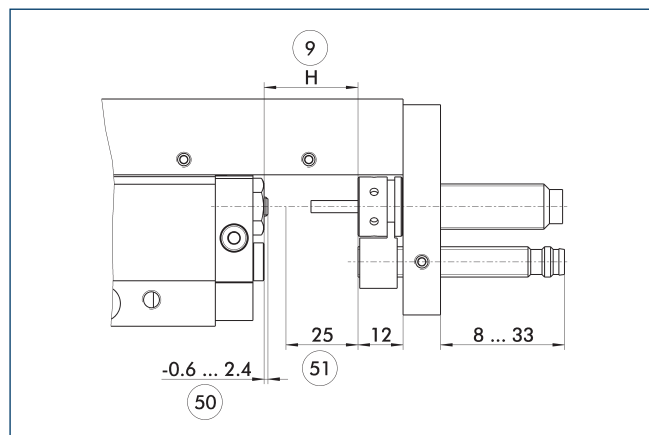


The linear module can be fastened either to the base body or the slide. The structure can also optionally be fastened to either the slide or the base body. This view shows the mounting of the module to the base body and the mounting of the structure to the slide.

- A Main connection - linear unit extended
- B Main connection - linear unit retracted
- ① Connection linear unit
- ② Attachment connection
- ③④ On both sides
- ③⑤ Back side
- ⑦③ Fit for centering pins
- ⑨① Through-holes in the face plate and thread in the base body (only single sided)
- ⑨① Inductive proximity switches

Description	A [mm]	B [mm]	Quantity B	C [mm]	Quantity C	D [mm]	E [mm]	G [mm]
LM 100-H025	170	50	2	25	1	25	95	50
LM 100-H050	270	50	4	25	3	25	145	100
LM 100-H075	270	50	4	25	3	25	145	100
LM 100-H100	370	50	6	25	5	25	195	150
LM 100-H125	370	50	6	25	5	25	195	150
LM 100-H150	470	50	8	25	7	25	245	200
LM 100-H175	470	50	8	25	7	25	245	200
LM 100-H200	570	50	10	25	9	25	295	250
LM 100-H225	570	50	10	25	9	25	295	250

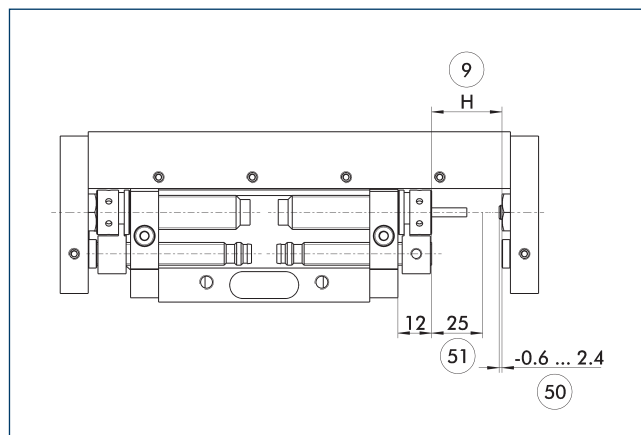
Fine adjustment



- ⑨ Nominal stroke
- ⑤① Stroke adjustment range
- ⑤② Damping stroke adjustment range

Shock absorbers can be mounted either on the base body or on the slide. This illustration shows the mounting on the slide and the possibility of stroke fine adjustment.

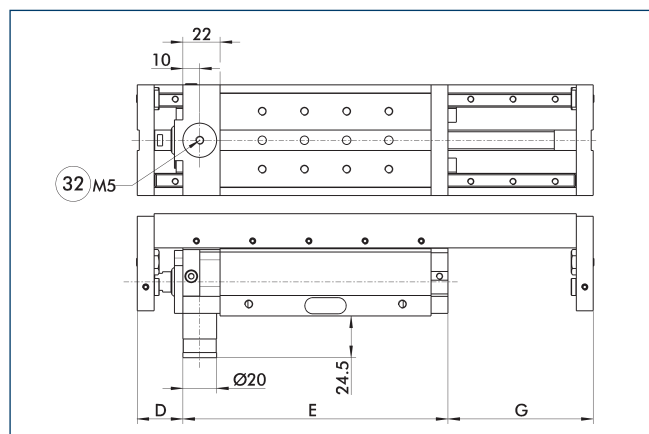
Fine adjustment



- ⑨ Nominal stroke
- ⑤① Stroke adjustment range
- ⑤② Damping stroke adjustment range

Shock absorbers can be mounted either on the base body or on the slide. This illustration shows the mounting on the base body and the possibility of stroke fine adjustment.

Rod lock

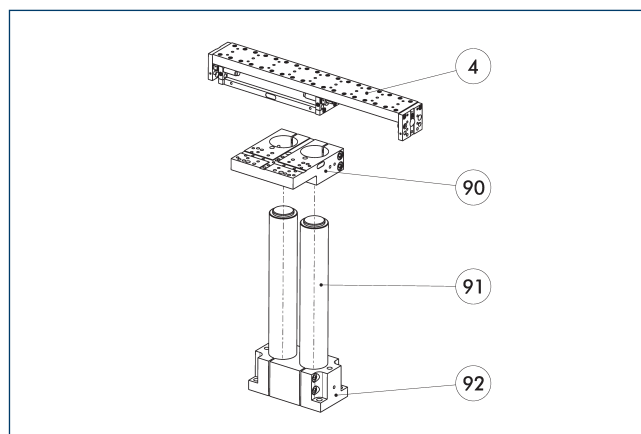


- ③② Pneumatic connection for holding brake

The rod lock prevents weights from falling in the event of energy loss, such as emergency stop situations. The rod lock can also be retrofitted, but this will reduce the nominal stroke.

Description	D	E	G
	[mm]	[mm]	[mm]
LM 100-H025-ASP	25	107	38
LM 100-H050-ASP	25	157	88
LM 100-H075-ASP	25	157	88
LM 100-H100-ASP	25	207	138
LM 100-H125-ASP	25	207	138
LM 100-H150-ASP	25	257	188
LM 100-H175-ASP	25	257	188
LM 100-H200-ASP	25	307	238
LM 100-H225-ASP	25	307	238

Attachment to a pillar assembly system



- ④ Linear unit
- ⑨① Double mounting plate, APDH
- ⑨① Pillars, hard-chromium plated, ground
- ⑨② Double socket, SOD

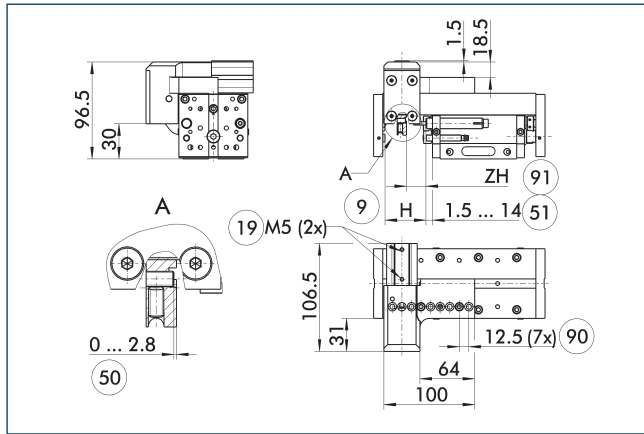
This unit can be attached to the pillar assembly system as standard. See the Kombibox software, which can be found online, for the right arrangement for your application.

Description	ID	pillar diameter	Material
		[mm]	
Pillar assembly system media feed-through			
SPL 50	0313692		
Pillar assembly system mounting plates			
APDH 85	0313414	55	Aluminum
APDV 35	0313896	35	Aluminum
APDV 85	0313416	55	Aluminum
APEH 35	0313893	35	Aluminum
APEH 85	0313413	55	Aluminum
APEV 35	0313895	35	Aluminum
APEV 85	0313415	55	Aluminum

LM 100

Universal linear module

LMZAW intermediate stop

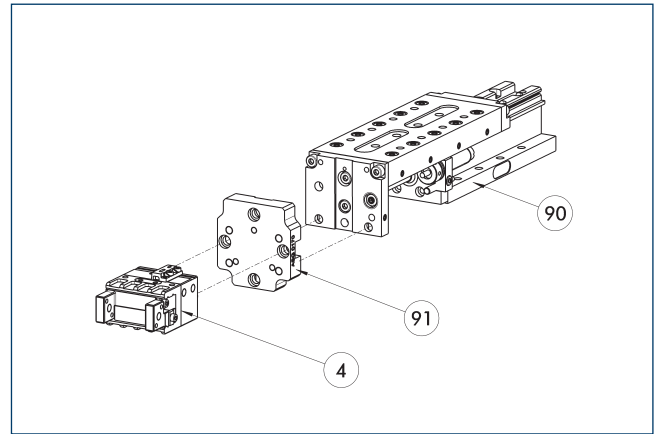


- 9 Nominal stroke
- 19 Air connection
- 50 Damping stroke adjustment range
- 51 Stroke adjustment range
- 90 Grid dimension, stroke adjustment
- 91 Intermediate stroke (min. 12.5 mm / max. useful stroke H-4 mm)

Depending on the application, the end position can be approached without a repeat stroke. The possible operating cycles can be obtained from the operating manual

Description	ID	Weight
		[kg]
Intermediate stop		
LMZAW 100	0314115	0.98

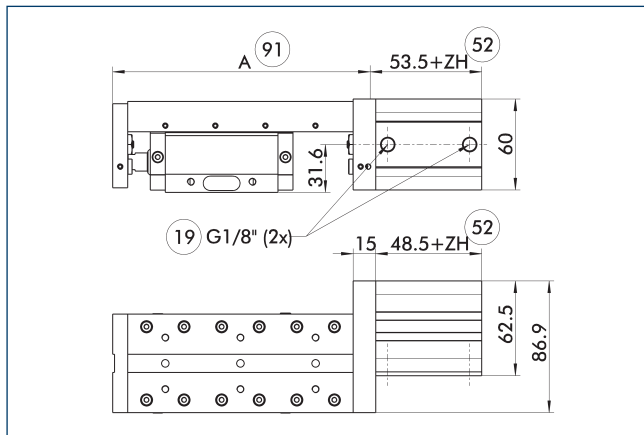
Modular Assembly Automation



- 4 Grippers
- 90 CLM/KLM/LM/ELP/ELM/ELS/HLM linear modules
- 91 ASG adapter plate

Grippers and linear modules can be combined with standard adapter plates from the modular assembly system. For more information see our main catalog "Modular Assembly Automation".

Intermediate stop, ZZA on the piston side



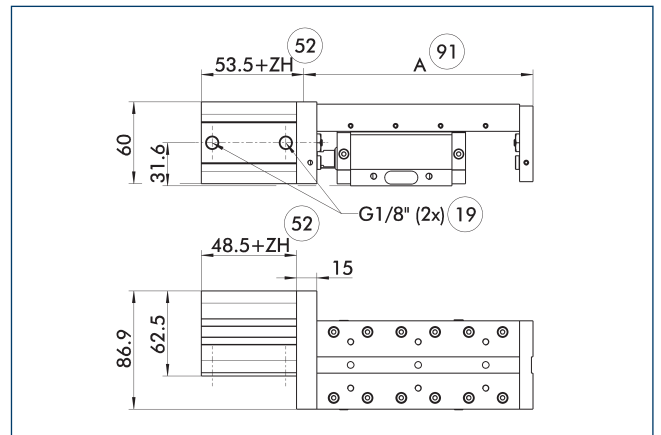
- 19 Air connection
- 52 Intermediate stroke
- 91 Overall length "A," the variant without intermediate stroke (see measurement chart of stroke variants)

The intermediate position is measured from the respective end position. The intermediate position can be approached from both sides and can proceed in the original stroke direction. The holding force is the piston force of the intermediate stop less the piston force of the linear module.

Description	Holding force	With with 0mm stroke	Weight per mm stroke
	[N]	[kg]	[kg]
Intermediate stop			
ZZA 101	460	0.75	0.006

① Sample order LM 100-H100-ZZA101-H30

Intermediate stop, ZZA on the piston rod side



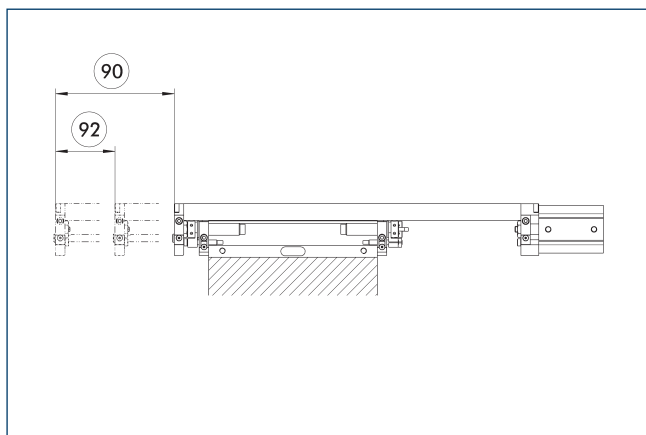
- 19 Air connection
- 52 Intermediate stroke
- 91 Overall length "A," the variant without intermediate stroke (see measurement chart of stroke variants)

The intermediate position is measured from the respective end position. The intermediate position can be approached from both sides and can proceed in the original stroke direction. The holding force is the piston force of the intermediate stop less the piston force of the linear module.

Description	Holding force	With with 0mm stroke	Weight per mm stroke
	[N]	[kg]	[kg]
Intermediate stop			
ZZA 102	460	0.75	0.006

① Sample order LM 100-H100-ZZA102-H30

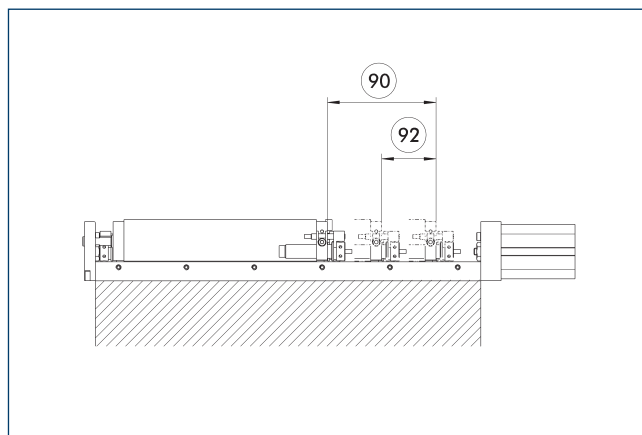
Design – variant 1



90 Nominal stroke 92 Intermediate stroke

The corresponding intermediate stroke (ZH) is calculated by subtracting the intermediate stop cylinder stroke from the nominal stroke of the module. The intermediate stroke adjustment is ± 3 mm.

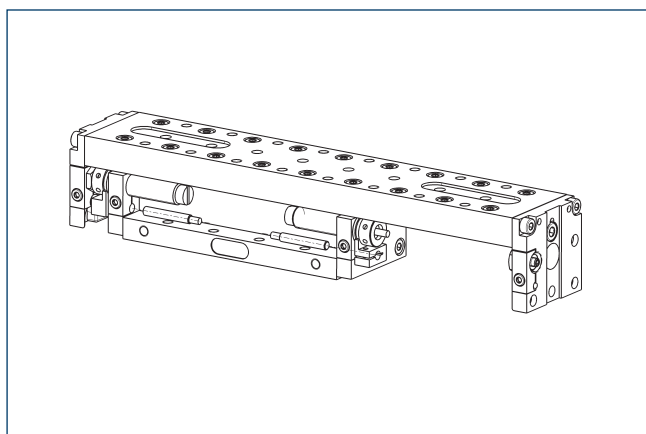
Design – variant 2



90 Nominal stroke 92 Intermediate stroke

The corresponding intermediate stroke (ZH) is calculated by subtracting the intermediate stop cylinder stroke from the nominal stroke of the module. The intermediate stroke adjustment is ± 3 mm.

Inductive Proximity Switches



Directly mounted end position monitoring.

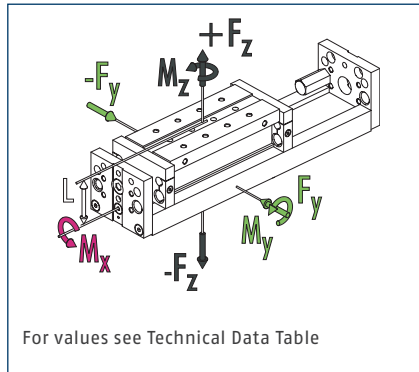
Description	ID	Often combined
Inductive Proximity Switches		
NI 30-KT	0313429	
Cable extension		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
Connection cables		
KA BG08-L 3P-0300-PNP	0301622	●
KA BG08-L 3P-0500-PNP	0301623	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-PNP	0301502	

① Two sensors (closer/S) are required for each unit and extension cables are available as an option. For sensor cables, note the minimum permissible bending radii. These are generally 35 mm.

LM 200

Universal linear module

Forces and moments



ⓘ The forces and moments shown here are maximum values for individual loading. If more than one force and / or moment occurs simultaneously, the case of application can be calculated by the TOOLBOX. The force F_y can just be calculated by the TOOLBOX.

Technical data

Description		LM 200-H025	LM 200-H050	LM 200-H075	LM 200-H100	LM 200-H125	LM 200-H150
ID		0314070	0314071	0314072	0314073	0314074	0314075
Stroke	[mm]	25	50	75	100	125	150
extend force	[N]	482	482	482	482	482	482
retracted force	[N]	415	415	415	415	415	415
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Piston diameter	[mm]	32	32	32	32	32	32
Bar diameter	[mm]	12	12	12	12	12	12
Min./max. operating pressure	[bar]	3/8	3/8	3/8	3/8	3/8	3/8
Nominal operating pressure	[bar]	6	6	6	6	6	6
fluid consumption/10 mm stroke	[cm ³]	8.04	8.04	8.04	8.04	8.04	8.04
Overall length	[mm]	224	224	324	324	424	424
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Weight	[kg]	3.9	3.9	5	5	6.1	6.1
Drive concept		Piston rod cylinders	Piston rod cylinders	Piston rod cylinders	Piston rod cylinders	Piston rod cylinders	Piston rod cylinders
Length L	[mm]	56.5	56.5	56.5	56.5	56.5	56.5
Moments M_x max./ M_y max./ M_z max.	[Nm]	50/63/31.5	50/63/31.5	72/90/45	72/90/45	94/117/58.5	94/117/58.5
Forces F_z max.	[N]	2190	2190	2170	2170	2150	2150
Options and their characteristics							
Rod lock version		LM 200-H025-ASP	LM 200-H050-ASP	LM 200-H075-ASP	LM 200-H100-ASP	LM 200-H125-ASP	LM 200-H150-ASP
ID		0314470	0314471	0314472	0314473	0314474	0314475
Stroke loss of nominal stroke (on the rod side)	[mm]	12	12	12	12	12	12
Weight	[kg]	3.99	3.99	5.09	5.09	6.19	6.19
static holding force	[N]	600	600	600	600	600	600
Max. axial play of the clamping	[mm]	0.25	0.25	0.25	0.25	0.25	0.25
Min. release pressure	[bar]	3	3	3	3	3	3

Description		LM 200-H175	LM 200-H200	LM 200-H225	LM 200-H250	LM 200-H275	LM 200-H300
ID		0314076	0314077	0314078	0314079	0314080	0314081
Stroke	[mm]	175	200	225	250	275	300
extend force	[N]	482	482	482	482	482	482
retracted force	[N]	415	415	415	415	415	415
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Piston diameter	[mm]	32	32	32	32	32	32
Bar diameter	[mm]	12	12	12	12	12	12
Min./max. operating pressure	[bar]	3/8	3/8	3/8	3/8	3/8	3/8
Nominal operating pressure	[bar]	6	6	6	6	6	6
fluid consumption/10 mm stroke	[cm ³]	8.04	8.04	8.04	8.04	8.04	8.04
Overall length	[mm]	524	524	624	624	724	724
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Weight	[kg]	7.2	7.2	8.3	8.3	9.4	9.4
Drive concept		Piston rod cylinders	Piston rod cylinders	Piston rod cylinders	Piston rod cylinders	Piston rod cylinders	Piston rod cylinders
Length L	[mm]	56.5	56.5	56.5	56.5	56.5	56.5
Moments M_x max./ M_y max./ M_z max.	[Nm]	116/144/72	116/144/72	138/171/85.5	138/171/85.5	160/198/99	160/198/99
Forces F_z max.	[N]	2145	2145	2140	2140	2135	2135

Options and their characteristics

		LM 200-H175-ASP	LM 200-H200-ASP	LM 200-H225-ASP	LM 200-H250-ASP	LM 200-H275-ASP	LM 200-H300-ASP
Rod lock version							
ID		0314476	0314477	0314478	0314479	0314480	0314481
Stroke loss of nominal stroke (on the rod side)	[mm]	12	12	12	12	12	12
Weight	[kg]	7.29	7.29	8.39	8.39	9.49	9.49
static holding force	[N]	600	600	600	600	600	600
Max. axial play of the clamping	[mm]	0.25	0.25	0.25	0.25	0.25	0.25
Min. release pressure	[bar]	3	3	3	3	3	3

Description		LM 200-H325	LM 200-H350
ID		0314082	0314083
Stroke	[mm]	325	350
extend force	[N]	482	482
retracted force	[N]	415	415
Repeat accuracy	[mm]	0.02	0.02
Piston diameter	[mm]	32	32
Bar diameter	[mm]	12	12
Min./max. operating pressure	[bar]	3/8	3/8
Nominal operating pressure	[bar]	6	6
fluid consumption/10 mm stroke	[cm ³]	8.04	8.04
Overall length	[mm]	824	824
Protection class IP		40	40
Min./max. ambient temperature	[°C]	5/60	5/60
Weight	[kg]	10.5	10.5
Drive concept		Piston rod cylinders	Piston rod cylinders
Length L	[mm]	56.5	56.5
Moments M_x max./ M_y max./ M_z max.	[Nm]	182/225/112.5	182/225/112.5
Forces F_z max.	[N]	2130	2130

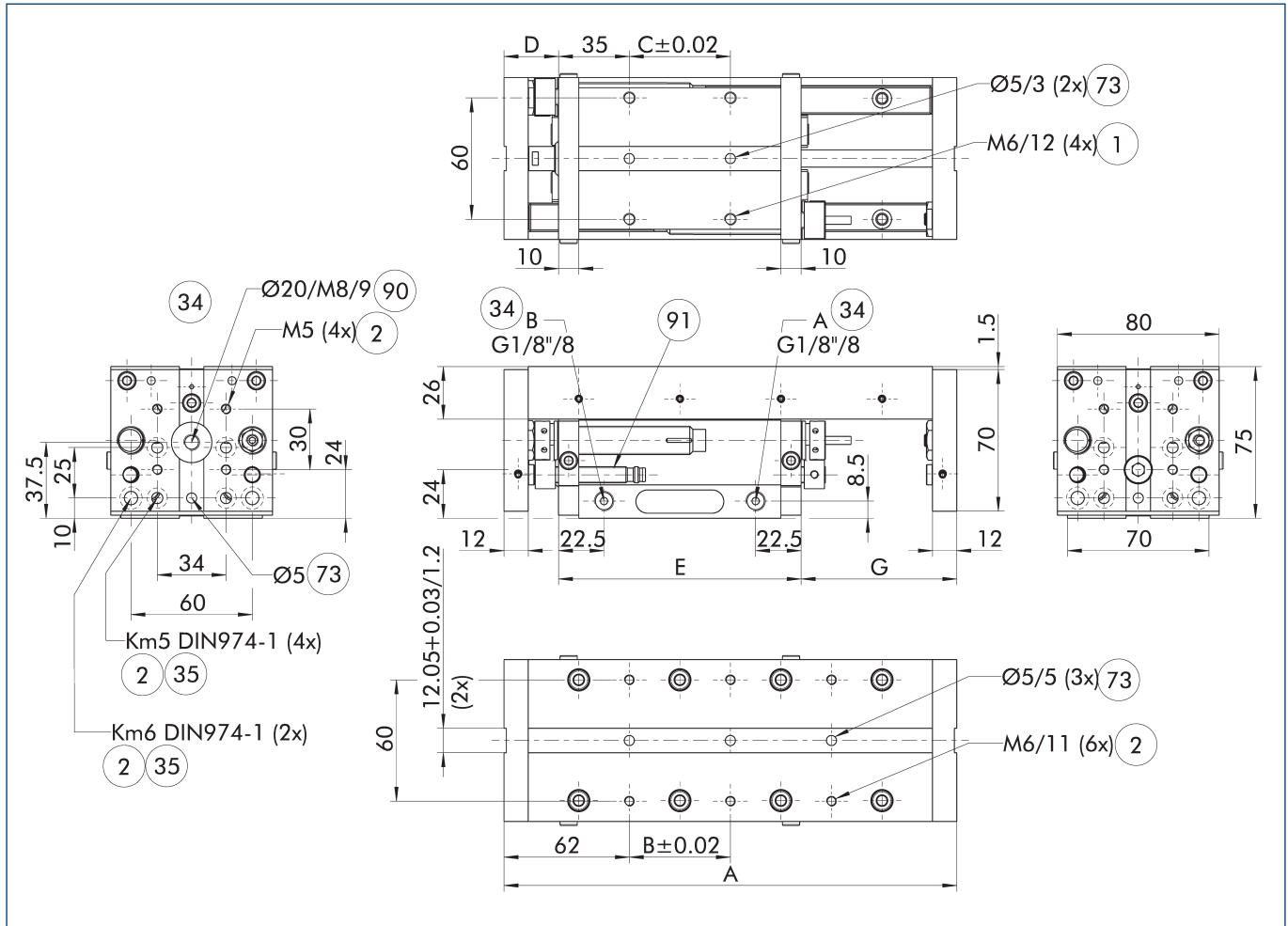
Options and their characteristics

		LM 200-H325-ASP	LM 200-H350-ASP
Rod lock version			
ID		0314482	0314483
Stroke loss of nominal stroke (on the rod side)	[mm]	12	12
Weight	[kg]	10.59	10.59
static holding force	[N]	600	600
Max. axial play of the clamping	[mm]	0.25	0.25
Min. release pressure	[bar]	3	3

LM 200

Universal linear module

Main view

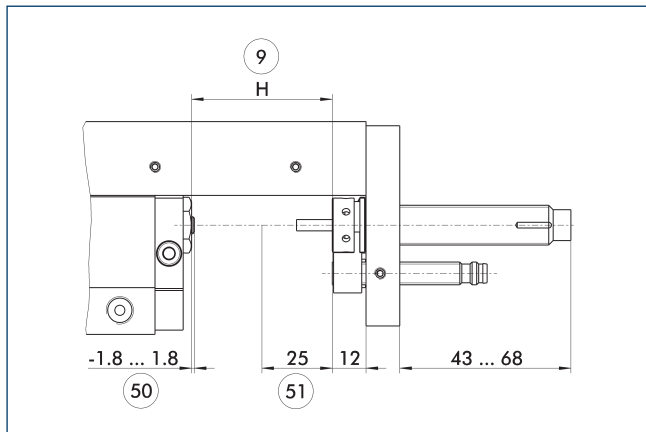


The linear module can be fastened either to the base body or the slide. The structure can also optionally be fastened to either the slide or the base body. This view shows the mounting of the module to the base body and the mounting of the structure to the slide.

- A Main connection - linear unit extended
- B Main connection - linear unit retracted
- ① Connection linear unit
- ② Attachment connection
- ③④ On both sides
- ③⑤ Back side
- ⑦③ Fit for centering pins
- ⑨⑩ Through-holes in the face plate and thread in the base body (only single sided)
- ⑨① Inductive proximity switches

Description	A [mm]	B [mm]	Quantity B	C [mm]	Quantity C	D [mm]	E [mm]	G [mm]
LM 200-H025	224	50	2	50	1	27	120	77
LM 200-H050	224	50	2	50	1	27	120	77
LM 200-H075	324	50	4	50	2	27	170	127
LM 200-H100	324	50	4	50	2	27	170	127
LM 200-H125	424	50	6	50	3	27	220	177
LM 200-H150	424	50	6	50	3	27	220	177
LM 200-H175	524	50	8	50	4	27	270	227
LM 200-H200	524	50	8	50	4	27	270	227
LM 200-H225	624	50	10	50	5	27	320	277
LM 200-H250	624	50	10	50	5	27	320	277
LM 200-H275	724	50	12	50	6	27	370	327
LM 200-H300	724	50	12	50	6	27	370	327
LM 200-H325	824	50	14	50	7	27	420	377
LM 200-H350	824	50	14	50	7	27	420	377

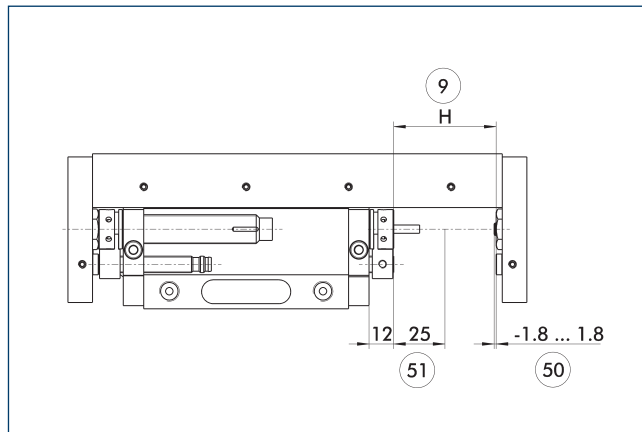
Fine adjustment



- ⑨ Nominal stroke
- ⑤① Stroke adjustment range
- ⑤② Damping stroke adjustment range

Shock absorbers can be mounted either on the base body or on the slide. This illustration shows the mounting on the slide and the possibility of stroke fine adjustment.

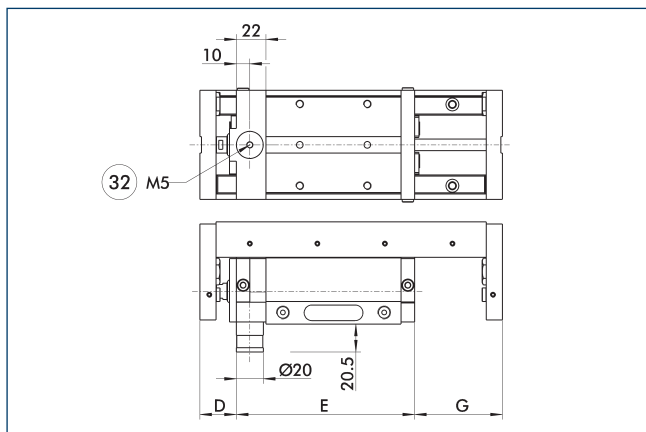
Fine adjustment



- ⑨ Nominal stroke
- ⑤① Stroke adjustment range
- ⑤② Damping stroke adjustment range

Shock absorbers can be mounted either on the base body or on the slide. This illustration shows the mounting on the base body and the possibility of stroke fine adjustment.

Rod lock

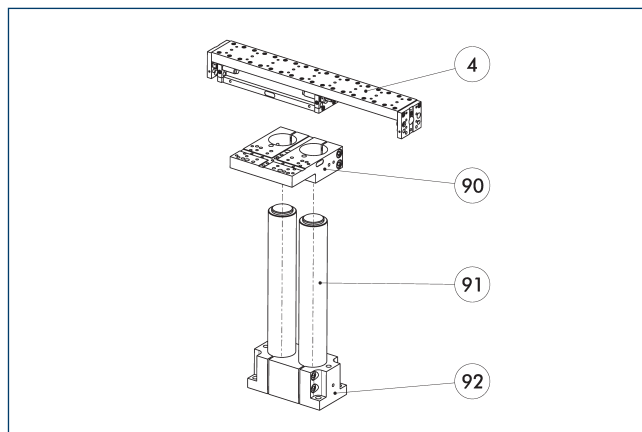


- ③② Pneumatic connection for holding brake

The rod lock prevents weights from falling in the event of energy loss, such as emergency stop situations. The rod lock can also be retrofitted, but this will reduce the nominal stroke.

Description	D	E	G
	[mm]	[mm]	[mm]
LM 200-H025-ASP	27	132	65
LM 200-H050-ASP	27	132	65
LM 200-H075-ASP	27	182	115
LM 200-H100-ASP	27	182	115
LM 200-H125-ASP	27	232	165
LM 200-H150-ASP	27	232	165
LM 200-H175-ASP	27	282	215
LM 200-H200-ASP	27	282	215
LM 200-H225-ASP	27	332	265
LM 200-H250-ASP	27	332	265
LM 200-H275-ASP	27	382	315
LM 200-H300-ASP	27	382	315
LM 200-H325-ASP	27	432	365
LM 200-H350-ASP	27	432	365

Attachment to a pillar assembly system



- ④ Linear unit
- ⑨① Pillars, hard-chromium plated, ground
- ⑨② Double mounting plate, APDH
- ⑨③ Double socket, SOD

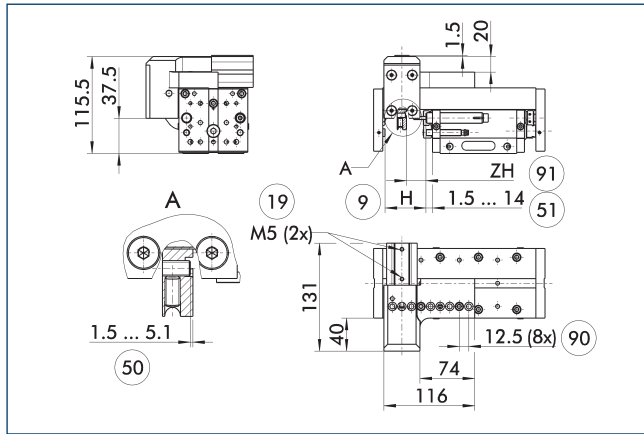
This unit can be attached to the pillar assembly system as standard. See the Kombibox software, which can be found online, for the right arrangement for your application.

Description	ID	pillar diameter	Material
		[mm]	
Pillar assembly system media feed-through			
SPL 200	0313693		
Pillar assembly system mounting plates			
APDH 85	0313414	55	Aluminum
APDV 85	0313416	55	Aluminum
APEH 85	0313413	55	Aluminum
APEV 85	0313415	55	Aluminum

LM 200

Universal linear module

LMZAW intermediate stop

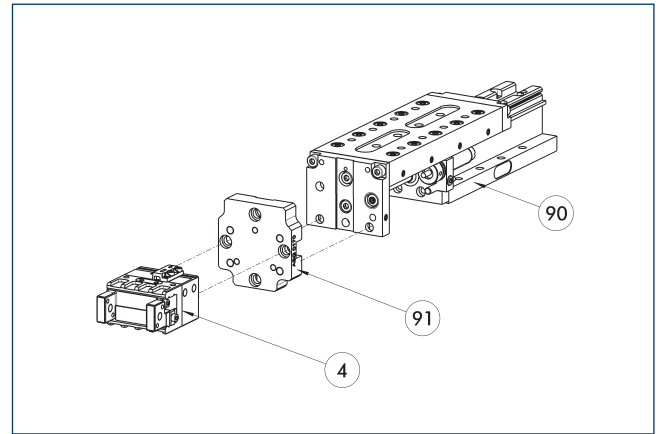


- ⑨ Nominal stroke
- ①⑨ Air connection
- ⑤⑩ Damping stroke adjustment range
- ⑤① Stroke adjustment range
- ⑨⑩ Grid dimension, stroke adjustment
- ⑨① Intermediate stroke (min. 12.5 mm / max. useful stroke H-4 mm)

Depending on the application, the end position can be approached without a repeat stroke. The possible operating cycles can be obtained from the operating manual

Description	ID	Weight
		[kg]
Intermediate stop		
LMZAW 200	0314116	1.4

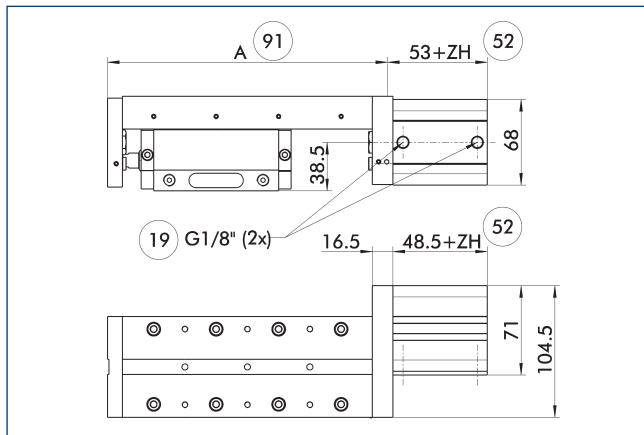
Modular Assembly Automation



- ④ Grippers
- ⑨① CLM/KLM/LM/ELP/ELM/ELS/HLM linear modules
- ⑨① ASG adapter plate

Grippers and linear modules can be combined with standard adapter plates from the modular assembly system. For more information see our main catalog "Modular Assembly Automation".

Intermediate stop, ZZA on the piston side



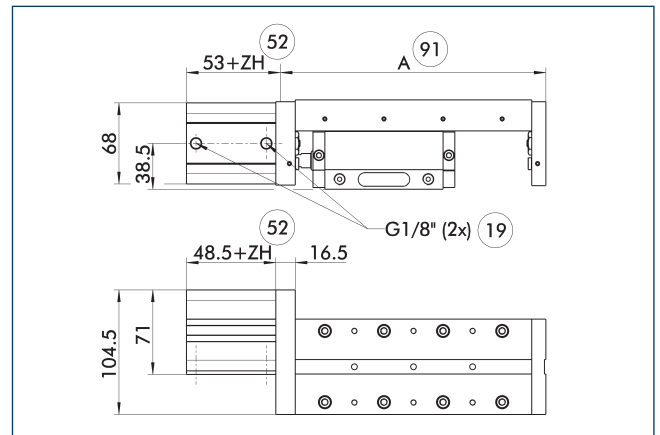
- ①⑨ Air connection
- ⑤② Intermediate stroke
- ⑨① Overall length "A," the variant without intermediate stroke (see measurement chart of stroke variants)

The intermediate position is measured from the respective end position. The intermediate position can be approached from both sides and can proceed in the original stroke direction. The holding force is the piston force of the intermediate stop less the piston force of the linear module.

Description	Holding force	With with 0mm stroke	Weight per mm stroke
	[N]	[kg]	[kg]
Intermediate stop			
ZZA 201	696	0.9	0.008

① Sample order LM 200-H100-ZZA201-H30

Intermediate stop, ZZA on the piston rod side



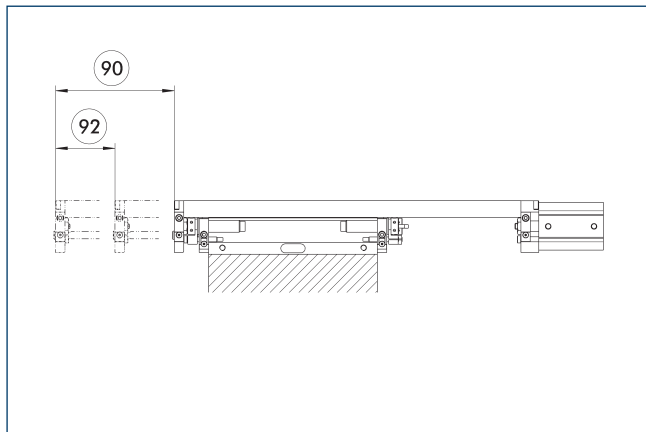
- ①⑨ Air connection
- ⑤② Intermediate stroke
- ⑨① Overall length "A," the variant without intermediate stroke (see measurement chart of stroke variants)

The intermediate position is measured from the respective end position. The intermediate position can be approached from both sides and can proceed in the original stroke direction. The holding force is the piston force of the intermediate stop less the piston force of the linear module.

Description	Holding force	With with 0mm stroke	Weight per mm stroke
	[N]	[kg]	[kg]
Intermediate stop			
ZZA 202	696	0.9	0.008

① Sample order LM 200-H100-ZZA202-H30

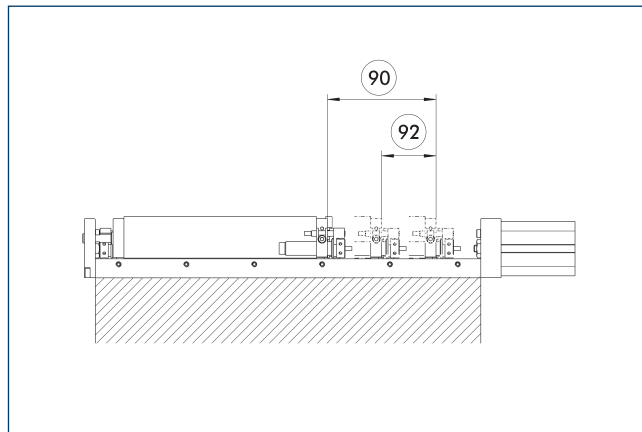
Design – variant 1



90 Nominal stroke 92 Intermediate stroke

The corresponding intermediate stroke (ZH) is calculated by subtracting the intermediate stop cylinder stroke from the nominal stroke of the module. The intermediate stroke adjustment is ± 3 mm.

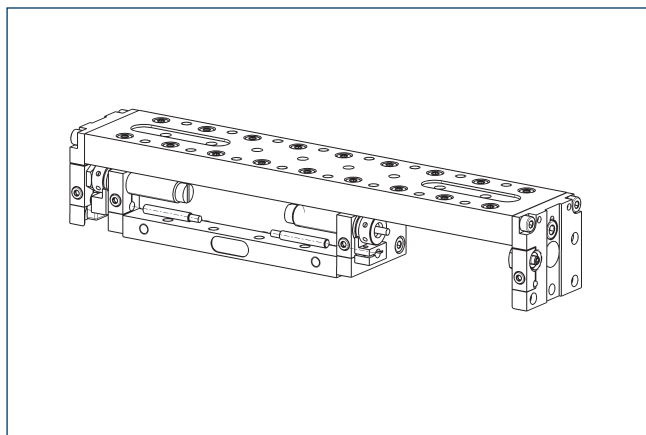
Design – variant 2



90 Nominal stroke 92 Intermediate stroke

The corresponding intermediate stroke (ZH) is calculated by subtracting the intermediate stop cylinder stroke from the nominal stroke of the module. The intermediate stroke adjustment is ± 3 mm.

Inductive Proximity Switches



Directly mounted end position monitoring.

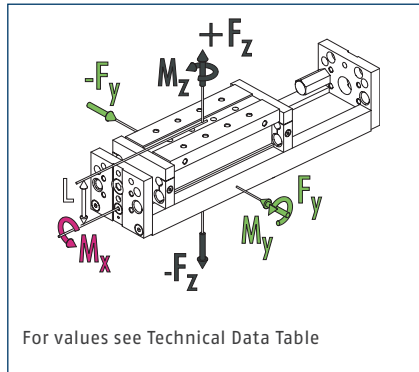
Description	ID	Often combined
Inductive Proximity Switches		
NI 30-KT	0313429	
Cable extension		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
Connection cables		
KA BG08-L 3P-0300-PNP	0301622	●
KA BG08-L 3P-0500-PNP	0301623	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-PNP	0301502	

① Two sensors (closer/S) are required for each unit and extension cables are available as an option. For sensor cables, note the minimum permissible bending radii. These are generally 35 mm.

LM 300

Universal linear module

Forces and moments



ⓘ The forces and moments shown here are maximum values for individual loading. If more than one force and / or moment occurs simultaneously, the case of application can be calculated by the TOOLBOX. The force F_y can just be calculated by the TOOLBOX.

Technical data

Description		LM 300-H025	LM 300-H050	LM 300-H075	LM 300-H100	LM 300-H125	LM 300-H150
ID		0314084	0314085	0314086	0314087	0314088	0314089
Stroke	[mm]	25	50	75	100	125	150
extend force	[N]	753	753	753	753	753	753
retracted force	[N]	633	633	633	633	633	633
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Piston diameter	[mm]	40	40	40	40	40	40
Bar diameter	[mm]	16	16	16	16	16	16
Min./max. operating pressure	[bar]	3/8	3/8	3/8	3/8	3/8	3/8
Nominal operating pressure	[bar]	6	6	6	6	6	6
fluid consumption/10 mm stroke	[cm ³]	12.57	12.57	12.57	12.57	12.57	12.57
Overall length	[mm]	224	224	324	324	424	424
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Weight	[kg]	4.85	4.85	6.2	6.2	7.55	7.55
Drive concept		Piston rod cylinders	Piston rod cylinders	Piston rod cylinders	Piston rod cylinders	Piston rod cylinders	Piston rod cylinders
Length L	[mm]	64.5	64.5	64.5	64.5	64.5	64.5
Moments M_x max./ M_y max./ M_z max.	[Nm]	70/63/31.5	70/63/31.5	92/90/45	92/90/45	114/117/58.5	114/117/58.5
Forces F_z max.	[N]	2190	2190	2170	2170	2150	2150
Options and their characteristics							
Rod lock version		LM 300-H025-ASP	LM 300-H050-ASP	LM 300-H075-ASP	LM 300-H100-ASP	LM 300-H125-ASP	LM 300-H150-ASP
ID		0314484	0314485	0314486	0314487	0314488	0314489
Stroke loss of nominal stroke (on the rod side)	[mm]	18	18	18	18	18	18
Weight	[kg]	5.01	5.01	6.36	6.36	7.71	7.71
static holding force	[N]	1000	1000	1000	1000	1000	1000
Max. axial play of the clamping	[mm]	0.3	0.3	0.3	0.3	0.3	0.3
Min. release pressure	[bar]	3	3	3	3	3	3

Description		LM 300-H175	LM 300-H200	LM 300-H225	LM 300-H250	LM 300-H275	LM 300-H300
ID		0314090	0314091	0314092	0314093	0314094	0314095
Stroke	[mm]	175	200	225	250	275	300
extend force	[N]	753	753	753	753	753	753
retracted force	[N]	633	633	633	633	633	633
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Piston diameter	[mm]	40	40	40	40	40	40
Bar diameter	[mm]	16	16	16	16	16	16
Min./max. operating pressure	[bar]	3/8	3/8	3/8	3/8	3/8	3/8
Nominal operating pressure	[bar]	6	6	6	6	6	6
fluid consumption/10 mm stroke	[cm ³]	12.57	12.57	12.57	12.57	12.57	12.57
Overall length	[mm]	524	524	624	624	724	724
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Weight	[kg]	8.9	8.9	10.25	10.25	11.6	11.6
Drive concept		Piston rod cylinders	Piston rod cylinders	Piston rod cylinders	Piston rod cylinders	Piston rod cylinders	Piston rod cylinders
Length L	[mm]	64.5	64.5	64.5	64.5	64.5	64.5
Moments M_x max./ M_y max./ M_z max.	[Nm]	136/144/72	136/144/72	158/171/85.5	158/171/85.5	180/198/99	180/198/99
Forces F_z max.	[N]	2145	2145	2140	2140	2135	2135

Options and their characteristics

Rod lock version		LM 300-H175-ASP	LM 300-H200-ASP	LM 300-H225-ASP	LM 300-H250-ASP	LM 300-H275-ASP	LM 300-H300-ASP
ID		0314490	0314491	0314492	0314493	0314494	0314495
Stroke loss of nominal stroke (on the rod side)	[mm]	18	18	18	18	18	18
Weight	[kg]	9.06	9.06	10.41	10.41	11.76	11.76
static holding force	[N]	1000	1000	1000	1000	1000	1000
Max. axial play of the clamping	[mm]	0.3	0.3	0.3	0.3	0.3	0.3
Min. release pressure	[bar]	3	3	3	3	3	3

Description		LM 300-H325	LM 300-H350	LM 300-H375	LM 300-H400	LM 300-H425	LM 300-H450
ID		0314096	0314097	0314098	0314099	0314100	0314101
Stroke	[mm]	325	350	375	400	425	450
extend force	[N]	753	753	753	753	753	753
retracted force	[N]	633	633	633	633	633	633
Repeat accuracy	[mm]	0.02	0.02	0.02	0.02	0.02	0.02
Piston diameter	[mm]	40	40	40	40	40	40
Bar diameter	[mm]	16	16	16	16	16	16
Min./max. operating pressure	[bar]	3/8	3/8	3/8	3/8	3/8	3/8
Nominal operating pressure	[bar]	6	6	6	6	6	6
fluid consumption/10 mm stroke	[cm ³]	12.57	12.57	12.57	12.57	12.57	12.57
Overall length	[mm]	824	824	924	924	1024	1024
Protection class IP		40	40	40	40	40	40
Min./max. ambient temperature	[°C]	5/60	5/60	5/60	5/60	5/60	5/60
Weight	[kg]	12.95	12.95	14.3	14.3	15.65	15.65
Drive concept		Piston rod cylinders	Piston rod cylinders	Piston rod cylinders	Piston rod cylinders	Piston rod cylinders	Piston rod cylinders
Length L	[mm]	64.5	64.5	64.5	64.5	64.5	64.5
Moments M_x max./ M_y max./ M_z max.	[Nm]	202/225/112.5	202/225/112.5	224/252/126	224/252/126	246/279/139.5	246/279/139.5
Forces F_z max.	[N]	2130	2130	2125	2125	2125	2125

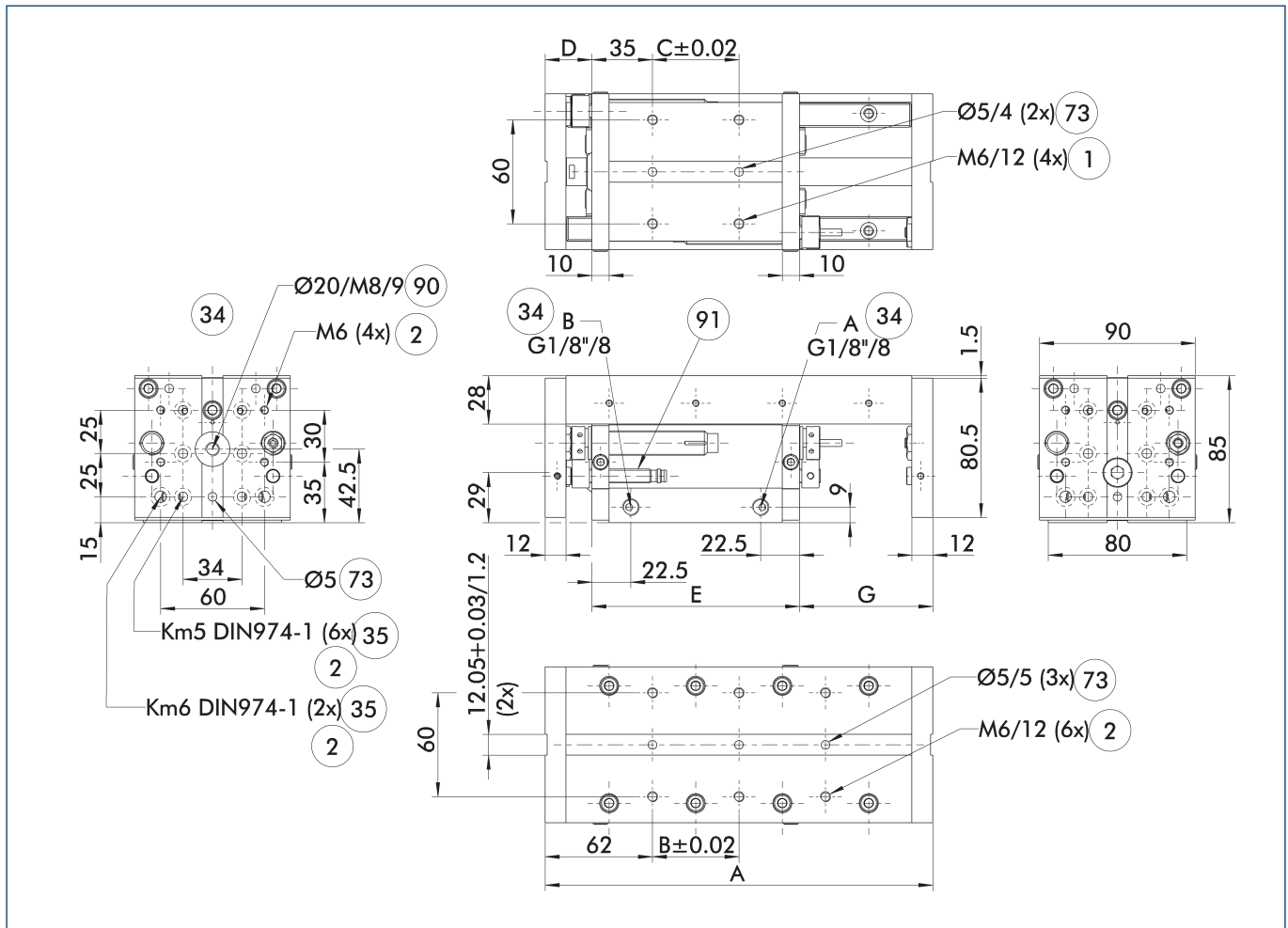
Options and their characteristics

Rod lock version		LM 300-H325-ASP	LM 300-H350-ASP	LM 300-H375-ASP	LM 300-H400-ASP	LM 300-H425-ASP	LM 300-H450-ASP
ID		0314496	0314497	0314498	0314499	0314500	0314501
Stroke loss of nominal stroke (on the rod side)	[mm]	18	18	18	18	18	18
Weight	[kg]	13.11	13.11	14.46	14.46	15.81	15.81
static holding force	[N]	1000	1000	1000	1000	1000	1000
Max. axial play of the clamping	[mm]	0.3	0.3	0.3	0.3	0.3	0.3
Min. release pressure	[bar]	3	3	3	3	3	3

LM 300

Universal linear module

Main view

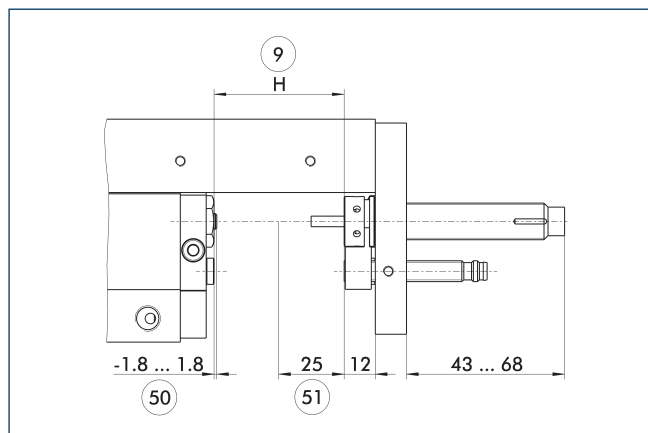


The linear module can be fastened either to the base body or the slide. The structure can also optionally be fastened to either the slide or the base body. This view shows the mounting of the module to the base body and the mounting of the structure to the slide.

- A Main connection - linear unit extended
- B Main connection - linear unit retracted
- ① Connection linear unit
- ② Attachment connection
- ③④ On both sides
- ③⑤ Back side
- ⑦③ Fit for centering pins
- ⑨⑩ Through-holes in the face plate and thread in the base body (only single sided)
- ⑨① Inductive proximity switches

Description	A	B	Quantity B	C	Quantity C	D	E	G
	[mm]	[mm]		[mm]		[mm]	[mm]	[mm]
LM 300-H025	224	50	2	50	1	27	120	77
LM 300-H050	224	50	2	50	1	27	120	77
LM 300-H075	324	50	4	50	2	27	170	127
LM 300-H100	324	50	4	50	2	27	170	127
LM 300-H125	424	50	6	50	3	27	220	177
LM 300-H150	424	50	6	50	3	27	220	177
LM 300-H175	524	50	8	50	4	27	270	227
LM 300-H200	524	50	8	50	4	27	270	227
LM 300-H225	624	50	10	50	5	27	320	277
LM 300-H250	624	50	10	50	5	27	320	277
LM 300-H275	724	50	12	50	6	27	370	327
LM 300-H300	724	50	12	50	6	27	370	327
LM 300-H325	824	50	14	50	7	27	420	377
LM 300-H350	824	50	14	50	7	27	420	377
LM 300-H375	924	50	16	50	8	27	470	427
LM 300-H400	924	50	16	50	8	27	470	427
LM 300-H425	1024	50	18	50	9	27	520	477
LM 300-H450	1024	50	18	50	9	27	520	477

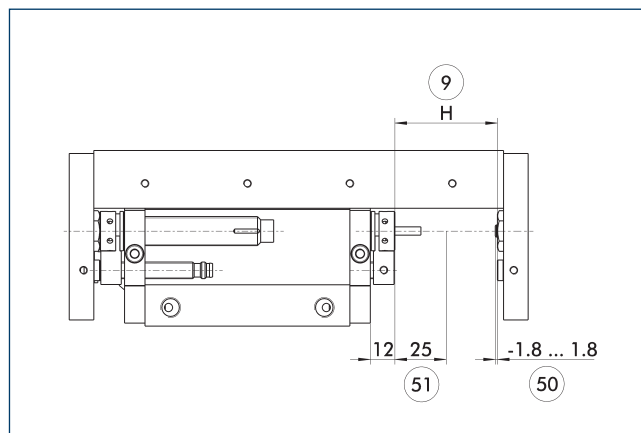
Fine adjustment



- ⑨ Nominal stroke
- ⑤① Stroke adjustment range
- ⑤① Damping stroke adjustment range

Shock absorbers can be mounted either on the base body or on the slide. This illustration shows the mounting on the slide and the possibility of stroke fine adjustment.

Fine adjustment



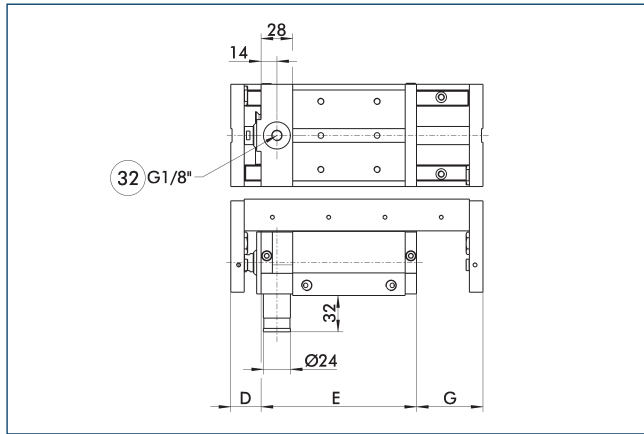
- ⑨ Nominal stroke
- ⑤① Stroke adjustment range
- ⑤① Damping stroke adjustment range

Shock absorbers can be mounted either on the base body or on the slide. This illustration shows the mounting on the base body and the possibility of stroke fine adjustment.

LM 300

Universal linear module

Rod lock

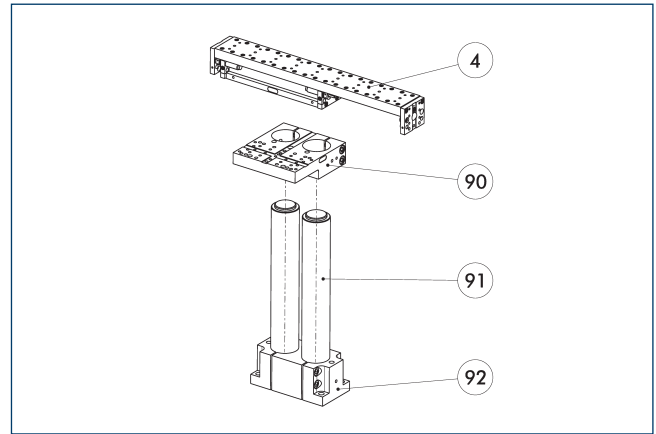


- 32 Pneumatic connection for holding brake

The rod lock prevents weights from falling in the event of energy loss, such as emergency stop situations. The rod lock can also be retrofitted, but this will reduce the nominal stroke.

Description	D	E	G
	[mm]	[mm]	[mm]
LM 300-H025-ASP	27	138	59
LM 300-H050-ASP	27	138	59
LM 300-H075-ASP	27	188	109
LM 300-H100-ASP	27	188	109
LM 300-H125-ASP	27	238	159
LM 300-H150-ASP	27	238	159
LM 300-H175-ASP	27	288	209
LM 300-H200-ASP	27	288	209
LM 300-H225-ASP	27	338	259
LM 300-H250-ASP	27	338	259
LM 300-H275-ASP	27	388	309
LM 300-H300-ASP	27	388	309
LM 300-H325-ASP	27	438	359
LM 300-H350-ASP	27	438	359
LM 300-H375-ASP	27	488	409
LM 300-H400-ASP	27	488	409
LM 300-H425-ASP	27	538	459
LM 300-H450-ASP	27	538	459

Attachment to a pillar assembly system

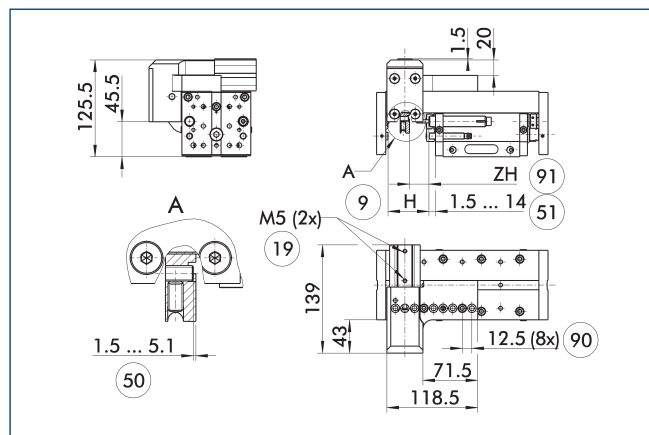


- 4 Linear unit
- 90 Double mounting plate, APDH
- 91 Pillars, hard-chromium plated, ground
- 92 Double socket, SOD

This unit can be attached to the pillar assembly system as standard. See the Kombibox software, which can be found online, for the right arrangement for your application.

Description	ID	pillar diameter	Material
		[mm]	
Pillar assembly system media feed-through			
SPL 200	0313693		
Pillar assembly system mounting plates			
APDH 85	0313414	55	Aluminum
APDV 85	0313416	55	Aluminum
APEH 85	0313413	55	Aluminum
APEV 85	0313415	55	Aluminum

LMZAW intermediate stop

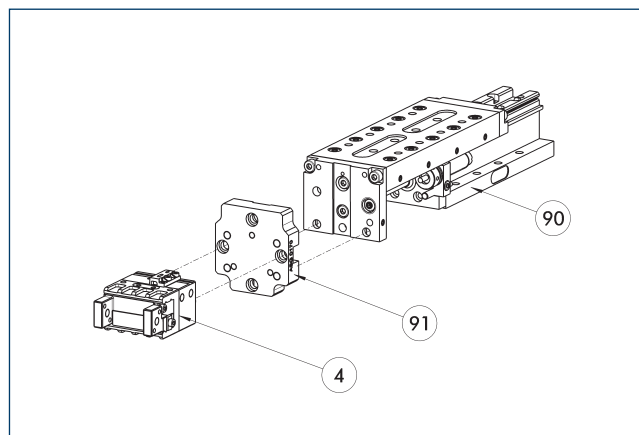


- 9 Nominal stroke
- 19 Air connection
- 50 Damping stroke adjustment range
- 51 Stroke adjustment range
- 90 Grid dimension, stroke adjustment
- 91 Intermediate stroke (min. 18.5 mm / max. useful stroke H-5 mm)

Depending on the application, the end position can be approached without a repeat stroke. The possible operating cycles can be obtained from the operating manual

Description	ID	Weight
		[kg]
Intermediate stop		
LMZAW 300	0314117	1.6

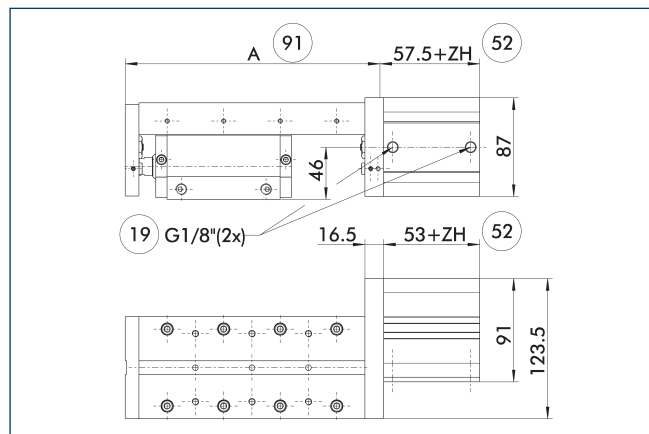
Modular Assembly Automation



- 4 Grippers
- 90 CLM/KLM/LM/ELP/ELM/ELS/HLM linear modules
- 91 ASG adapter plate

Grippers and linear modules can be combined with standard adapter plates from the modular assembly system. For more information see our main catalog "Modular Assembly Automation".

Intermediate stop, ZZA on the piston side



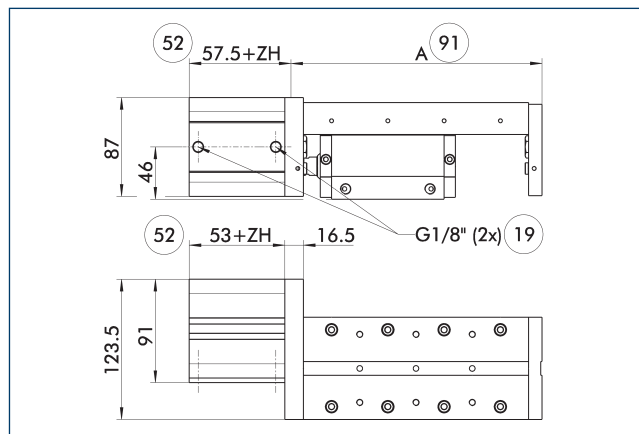
- 19 Air connection
- 52 Intermediate stroke
- 91 Overall length "A," the variant without intermediate stroke (see measurement chart of stroke variants)

The intermediate position is measured from the respective end position. The intermediate position can be approached from both sides and can proceed in the original stroke direction. The holding force is the piston force of the intermediate stop less the piston force of the linear module.

Description	Holding force	With with 0mm stroke	Weight per mm stroke
	[N]	[kg]	[kg]
Intermediate stop			
ZZA 301	1117	1.7	0.011

Sample order LM 300-H100-ZZA301-H30

Intermediate stop, ZZA on the piston rod side



- 19 Air connection
- 52 Intermediate stroke
- 91 Overall length "A," the variant without intermediate stroke (see measurement chart of stroke variants)

The intermediate position is measured from the respective end position. The intermediate position can be approached from both sides and can proceed in the original stroke direction. The holding force is the piston force of the intermediate stop less the piston force of the linear module.

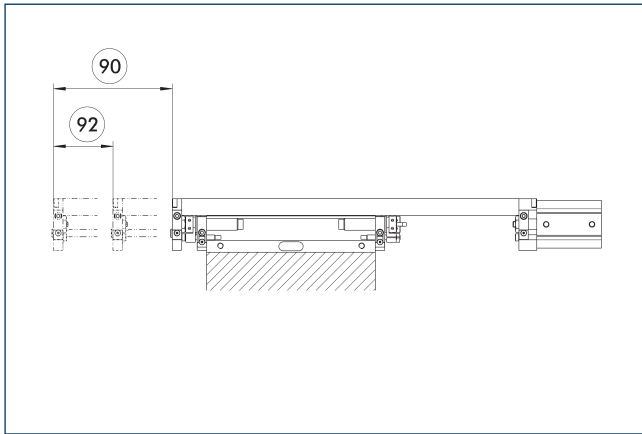
Description	Holding force	With with 0mm stroke	Weight per mm stroke
	[N]	[kg]	[kg]
Intermediate stop			
ZZA 302	1117	1.7	0.011

Sample order LM 300-H100-ZZA302-H30

LM 300

Universal linear module

Design – variant 1

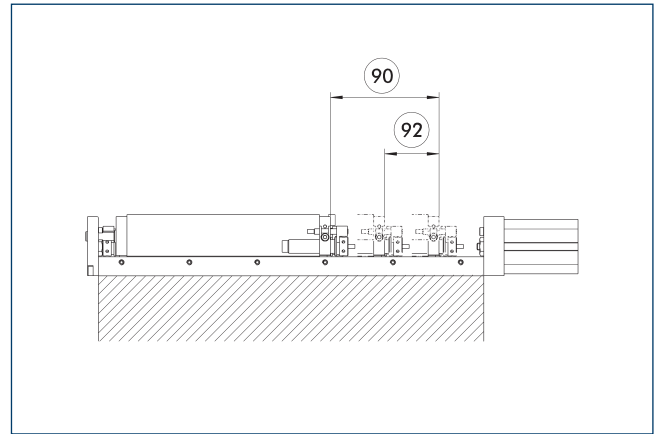


90 Nominal stroke

92 Intermediate stroke

The corresponding intermediate stroke (ZH) is calculated by subtracting the intermediate stop cylinder stroke from the nominal stroke of the module. The intermediate stroke adjustment is ± 3 mm.

Design – variant 2

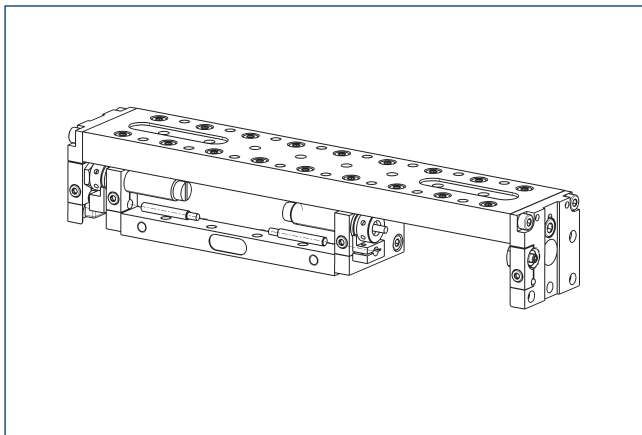


90 Nominal stroke

92 Intermediate stroke

The corresponding intermediate stroke (ZH) is calculated by subtracting the intermediate stop cylinder stroke from the nominal stroke of the module. The intermediate stroke adjustment is ± 3 mm.

Inductive Proximity Switches



Directly mounted end position monitoring.

Description	ID	Often combined
Inductive Proximity Switches		
NI 30-KT	0313429	
Cable extension		
KV BW08-SG08 3P-0030-PNP	0301495	
KV BW08-SG08 3P-0100-PNP	0301496	
KV BW08-SG08 3P-0200-PNP	0301497	●
Connection cables		
KA BG08-L 3P-0300-PNP	0301622	●
KA BG08-L 3P-0500-PNP	0301623	
KA BW08-L 3P-0300-PNP	0301594	
KA BW08-L 3P-0500-PNP	0301502	

① Two sensors (closer/S) are required for each unit and extension cables are available as an option. For sensor cables, note the minimum permissible bending radii. These are generally 35 mm.

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Folgen Sie uns



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Jens Lehmann, German goalkeeper legend, SCHUNK brand ambassador since 2012 for safe, precise gripping and holding.
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