

The **LM-P608** portal axis is the universally suitable axis from our linear axis program. With a profile cross section of 80 x 80mm and a permissible load of up to 60 kg it meets the demands of the applications for portal axes.

Through the variety of variation possibilities, the small dimensions and its elegant functional design it is the first choice for positioning tasks; both as a single axis or as a building block for a variety of robotic solutions.

The special extruded aluminium axis profile ensures high torsional and flexural strength as well as a low weight.


The axis can be driven by **Berger Lahr** 3-phase stepping motors or with customer specified motors such as servo motors.




**LM-P608**


## Features

- Roller or circulating ball bearings for optimised running characteristics.
- The guides are covered by the inner lying toothed belt.
- Long lubrication interval, and require no further maintenance.
- Extruded aluminium profile with high torsional and flexural strength.
- Versatile mounting possibilities due to the plain underside and "Item" compatible grooves on three sides of the profile.
- Trigger point for the limit switch is mounted in the profile groove and is moveable.
- Axis available in corrosion resistant material.
- Stroke length up to 5600mm. Cut to length.

Maximum load  **60 kg**

Maximum stroke  **5600 mm**

Maximum speed  **5 m/s**

Maximum driving torque  **25 Nm**

## Versions

Type key						Description	
LM-	P	608	R	T	100		
LM	P S H	608	R K		100	stroke per revolution of the driving shaft	
					175		
						T	Toothed belt
							Roller guide
							Circulating ball bearings
							Axis profile size
							Portal axis with driving motor
							Portal axis with driving shaft
							Supporting axis
							Linear module

e.g.: LM-P608RT100      Portal axis LM-P608  
with roller guide, toothed belt  
and 100 mm stroke per revolution  
of the drive shaft

## Specifications

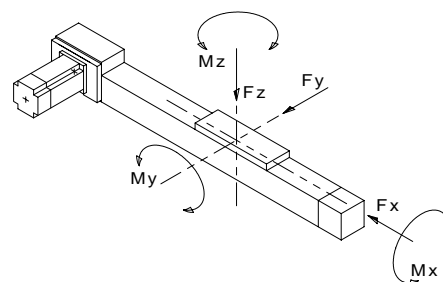
	LM-P608RT100	LM-P608RT175	LM-P608KT100	LM-P608KT175
Max. load	30 kg	30 kg	60 kg	60 kg
Max. stroke	5600 mm	5600 mm	5600 mm	5600 mm
Min. stroke ①	168 mm	168 mm	non restriction	non restriction
Max. torque at the driving shaft	15 Nm	25 Nm	15 Nm	25 Nm
Max. speed ②	5 m/s	5 m/s	5 m/s	5 m/s
Repeatability	± 0.05 mm	± 0,05 mm	± 0,05 mm	± 0,05 mm
Stroke per revolution of the driving shaft	100 mm	175 mm	100 mm	175 mm
Effective diameter	31.83 mm	55,7 mm	31,83 mm	55,7 mm
Rotational moment of inertia of the axis (without the motor)	2.1 kgcm <sup>2</sup>	2,8 kgcm <sup>2</sup>	2,1 kgcm <sup>2</sup>	2,8 kgcm <sup>2</sup>
Power transmission	Toothed belt b32 AT5	Toothed belt b32 AT5	Toothed belt b32 AT5	Toothed belt b32 AT5
Dead weight (zero stroke) (without the motor)	7.8 kg	7,8 kg	8 kg	8 kg
Weight per 100 mm	0.76 kg	0,76 kg	0,82 kg	0,82 kg
Carriage weight	1.9 kg	1,9 kg	1,9 kg	1,9 kg

① In case of smaller strokes the rollers do not touch the oil on the guide

② load and stroke dependent

## Maximum Forces and Torque

		LM-P608RT100 LM-P608RT175	LM-P608KT100 LM-P608KT175
Max. forces	F <sub>x</sub>	942 N	942 N
	F <sub>y</sub>	300 N	600 N
	F <sub>z</sub>	300 N	600 N
Max. torque	M <sub>x</sub>	35 Nm	60 Nm
	M <sub>y</sub>	100 Nm	250 Nm
	M <sub>z</sub>	160 Nm	200 Nm

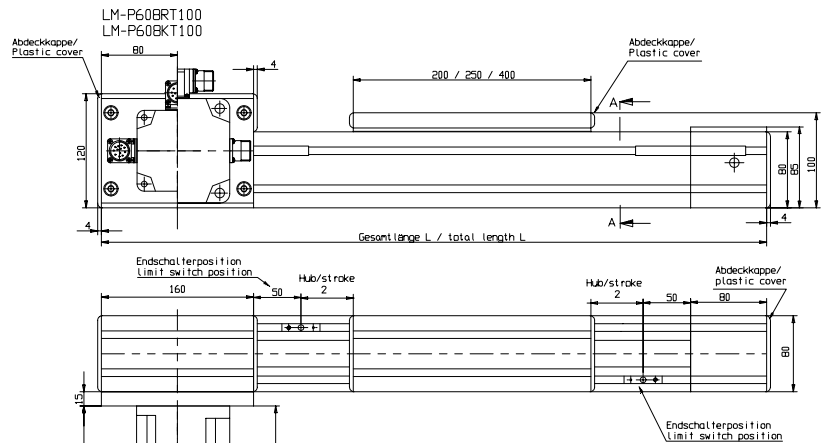
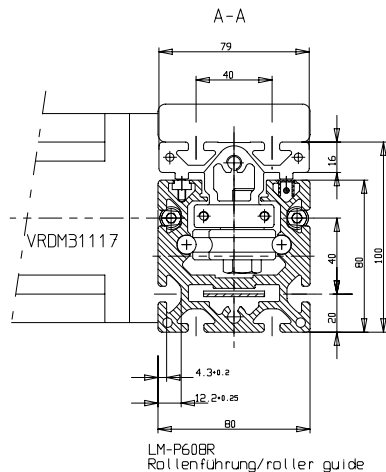


## Motors for LM-P608

Achse	3-phase stepping motors	AC-Synchron-Servomotor
LM-P608RT100	VRDM 31117 LWC	-
LM-P608RT175	VRDM 3913 LWC mit PL100 3:1	SER 3910/4L2EICB mit PL 50 3:1
LM-P608KT100	VRDM 31117 LWC	-
LM-P608KT175	VRDM 3913 LWC mit PL100 3:1	SER 3910/4L2EICB mit PL 50 3:1

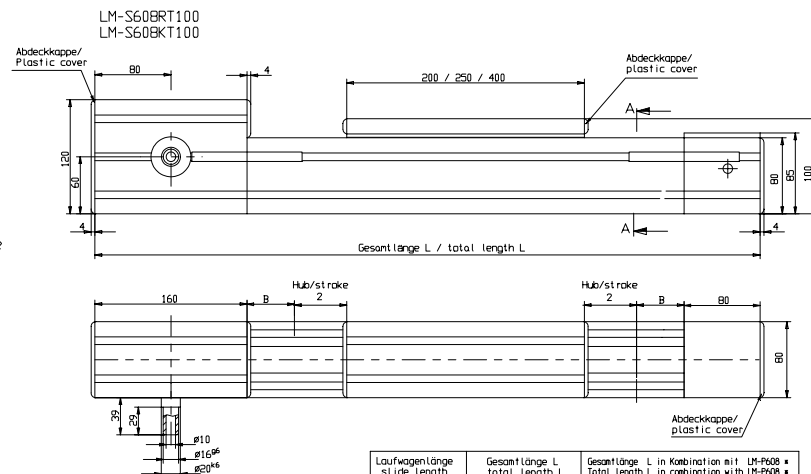
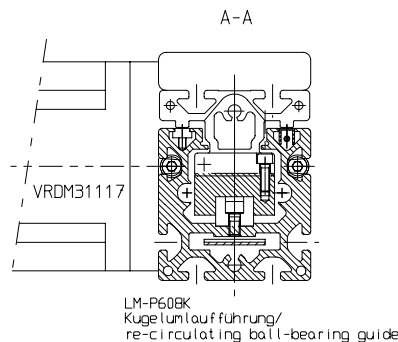


Further motors on request  
You may use customer specific motors.



Weitere Motoren  
auf Anfrage/  
further Motors  
on request

Laufwagenlänge slide length	Gesamtlänge L total length L
200	540 + Hub/stroke
250	590 + Hub/stroke
400	740 + Hub/stroke

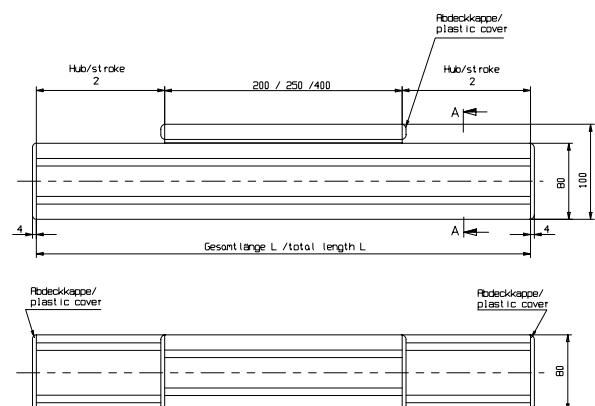


Laufwagenlänge slide length	Gesamtlänge L total length L	Gesamtlänge L in Kombination mit LM-P608 total length L in combination with LM-P608 *
200	440 + Hub/stroke	440 + (2x8) + Hub/stroke
250	490 + Hub/stroke	490 + (2x8) + Hub/stroke
400	640 + Hub/stroke	640 + (2x8) + Hub/stroke

B = Endschalterweg /  
limit switch position 50mm

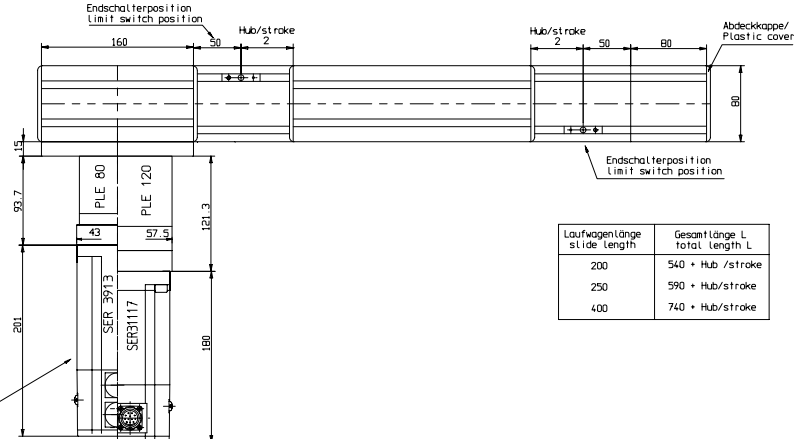
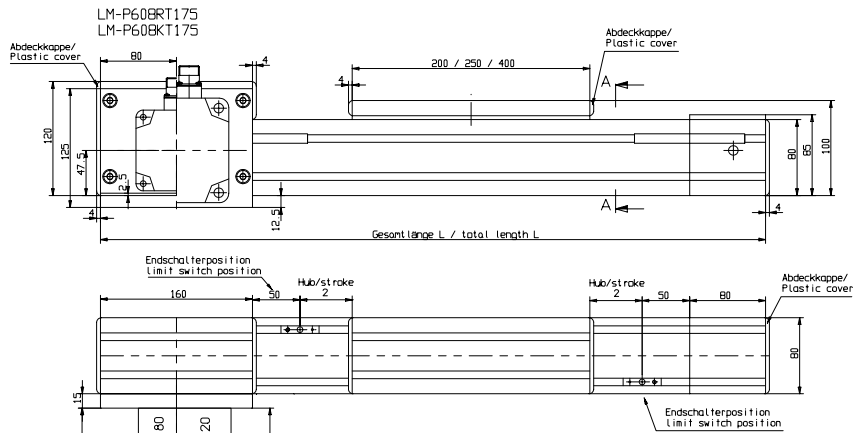
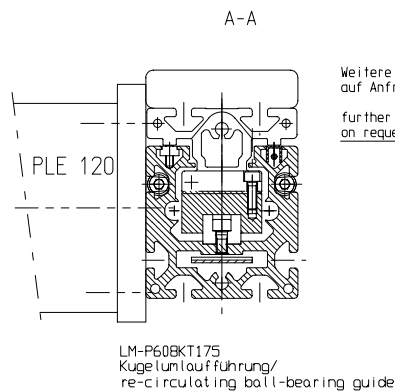
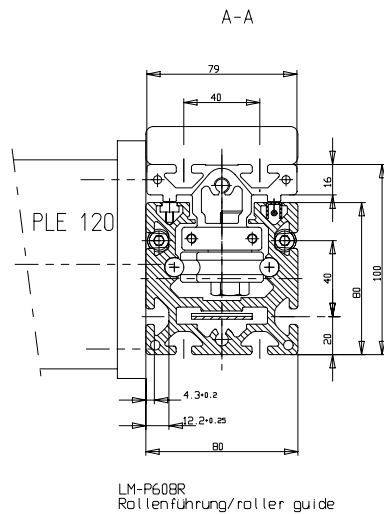
\* Siehe Maßblätter Mehrachsensysteme  
\* see outline drawing axes combinations

LM-H608R  
LM-H608K

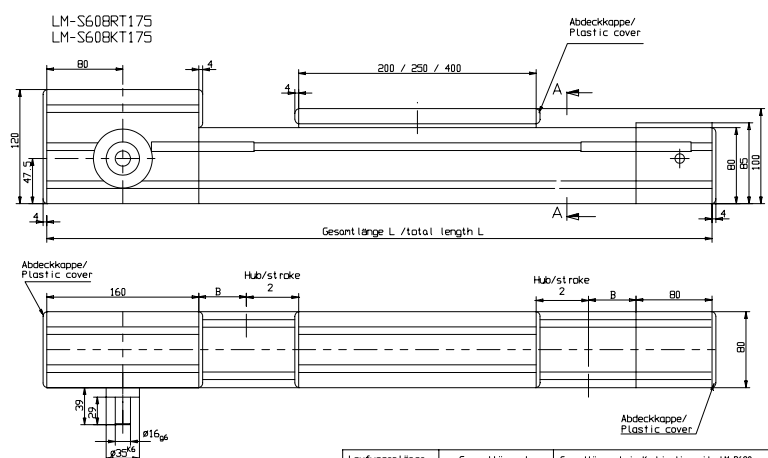


Laufwagenlänge slide length	Gesamtlänge L total length L	Gesamtlänge L in Kombination mit LM-P608 total length L in combination with LM-P608 *
200	200 + Hub/stroke	380mm + Hub/stroke
250	250 + Hub/stroke	430mm + Hub/stroke
400	400 + Hub/stroke	580mm + Hub/stroke

\* Siehe Maßblätter Mehrachsensysteme  
\* see outline drawing axes combinations



Laufwagenlänge slide length	Gesamtlänge L total length L
200	540 + Hub /stroke
250	590 + Hub/stroke
400	740 + Hub/stroke



Laufwagenlänge slide length	Gesamtlänge L total length L	Gesamtlänge L in Kombination mit LM-P608 • Total length L in combination with LM-P608 •
200	440 + Hub /stroke	440 + (2xB) + Hub/stroke
250	490 + Hub/stroke	490 + (2xB) + Hub/stroke
400	640 + Hub/stroke	640 + (2xB) + Hub/stroke
		B = Endschalterweg / limit switch position 50mm
		• Siehe Maßblätter Mehrachssysteme • see outline drawing axes combinations

**INQUIRY**

Please fill in the form on this page and mail or fax it to your local **Berger Lahr Positec** sales office.

Within the next couple of days, we will send you an obligation free offer for your desired axis version.

**Sender:**

Contact \_\_\_\_\_

Company \_\_\_\_\_

Street/P.O. box \_\_\_\_\_

City/postal code \_\_\_\_\_

Phone \_\_\_\_\_

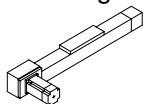
Fax \_\_\_\_\_

**Portal axis with motor LM-P608****Basic version**

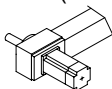
- ☐ LM-P608RT100  
☐ LM-P608RT175  
☐ LM-P608KT100  
☐ LM-P608KT175

**Motor to be mounted on:**

- ☐ left    ☐ right (standard)

**Extended drive shaft stub**

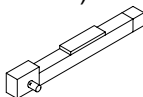
- ☐ without (standard)    ☐ with

**Portal axis with shaft LM-S608****Basic version**

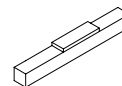
- ☐ LM-S608RT100  
☐ LM-S608RT175  
☐ LM-S608KT100  
☐ LM-S608KT175

**Shaft stub**

- ☐ left    ☐ right (standard)

**Supporting axis LM-H608****Basic version**

- ☐ LM-H608R  
☐ LM-H608K

**Stainless version**

- ☐ no (standard)  
☐ yes

**Number of carriages**

- ☐ one (standard)  
☐ two, distance \_\_\_\_\_ mm

**Limit switch**

- ☐ none  
☐ two    ☐ three

**Stroke length**

\_\_\_\_\_ mm (max.5600 mm)

**Carriage length**

- ☐ 200 mm    ☐ 250 mm    ☐ 400 mm (standard)

**NOTE**

Additional axes available on request.

**NOTE**

You may use customer specific motors.

**Standard motors for LM-P608**

- ☐ 3-phase stepping motor  
☐ 3-phase servo motor

**Motortyp****Remarks:**