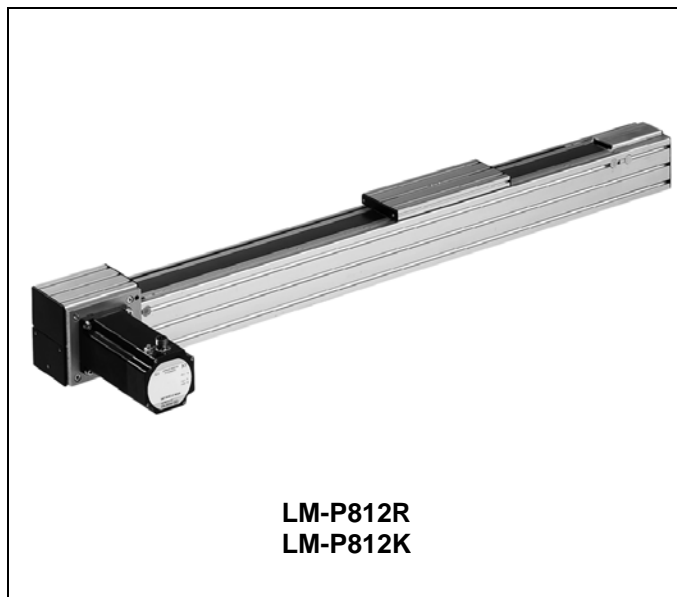


The **LM-P812** portal axis is suitable for applications that require the dynamic and high precision movement of loads up to 90kg.

Its application range is mainly in the field of palletising, packaging, and machine loading. In short, applications where large parts need to be moved over long distances.

With the same outer dimensions, different guides and transmission elements can be chosen, thus extending the application range into almost every field; both as a single axis or as a building block for a variety of robotic solutions.


The axis can be driven by **Berger Lahr** motors or with customer specified motors.




Features


- Roller or circulating ball bearings for optimised running characteristics.
- The guides are covered by the inner lying toothed belt.
- The guides can be lubricated from the outside, and require no further maintenance.
- Extruded aluminium profile with high torsional and flexural strength as well as a low mass.
- 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.

Versions

Maximum load  **90 kg**

Maximum stroke  **5600 mm**

Maximum speed  **5 m/s**

Maximum driving torque  **80 Nm**

Type key						Description
LM-	P	812	R	T	100	
					100	stroke per revolution of the driving shaft
					240	
				T		Toothed belt
			R			Roller guide
			K			Circulating ball bearings
		812				Axis size
	P					Portal axis with driving motor
	S					Portal axis with driving shaft
	H					Supporting axis
LM						Linear module

e.g.: LM-P812RT100 Portal axis LM-P812 with roller guide, toothed belt and 100 mm stroke per revolution of the drive shaft

Specifications

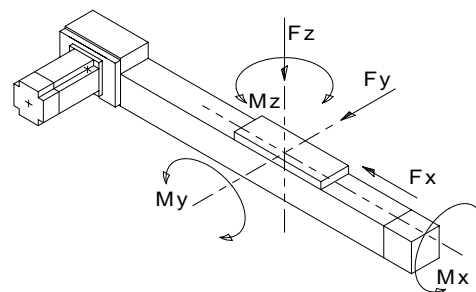
	LM-P812RT100	LM-P812RT240	LM-P812KT100	LM-P812KT240
Max. load	60 kg	60 kg	90 kg	90 kg
Max. stroke	5600 mm	5600 mm	5600 mm	5600 mm
Min. stroke ①	230 mm	230 mm	no restriction	no restriction
Max. torque at the driving shaft	30 Nm	80 Nm	30 Nm	80 Nm
Max. speed ②	5 m/s	5 m/s	5 m/s	5 m/s
Repeatability	± 0.05 mm	± 0.05 mm	± 0.05 mm	± 0.05 mm
Stroke per revolution of the driving shaft	100 mm	240 mm	100 mm	240 mm
Effective diameter	31.83 mm	76.39 mm	31.83 mm	76.39 mm
Rotational moment of inertia of the axis (without the motor)	9.47 kgcm ²	13.46 kgcm ²	9.47 kgcm ²	13.46 kgcm ²
Power transmission	Toothed belt b50 AT5	Toothed belt b50 AT10	Toothed belt b50 AT5	Toothed belt b50 AT10
Dead mass (zero stroke) (without the motor)	17.67 kg	17.67 kg	17.67 kg	17.67 kg
Mass per 100 mm	1.5 kg	1.51 kg	1.61 kg	1.61 kg
Carriage mass	3.43 kg	3.43 kg	3.86 kg	3.86 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-P812RT100 LM-P812RT240	LM-P812KT100 LM-P812KT240
Max. forces	F _x	1570 N	2000 N
	F _y	680 N	1050 N
	F _z	680 N	1050 N
Max. torque	M _x	70 Nm	80 Nm
	M _y	160 Nm	320 Nm
	M _z	250 Nm	270 Nm

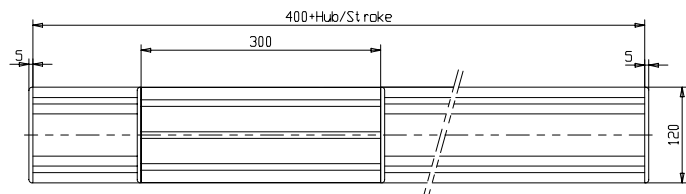
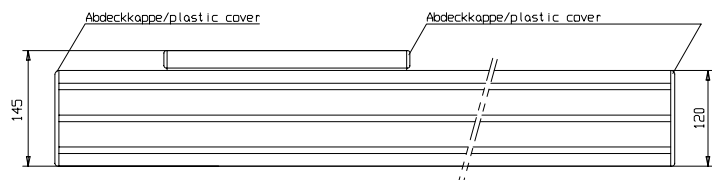
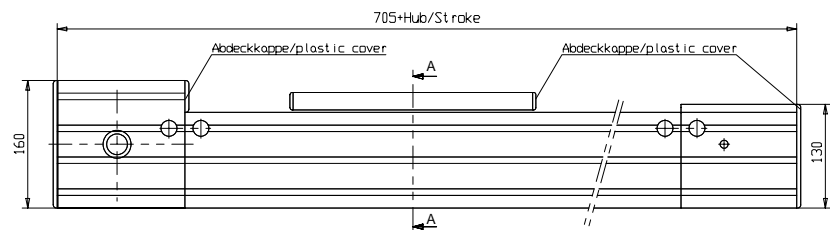
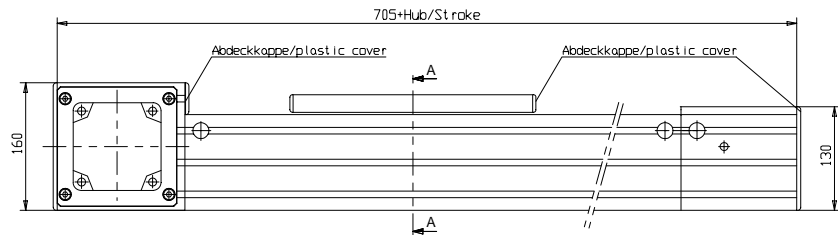
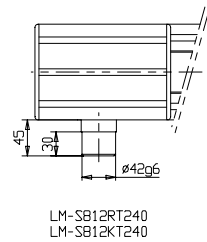
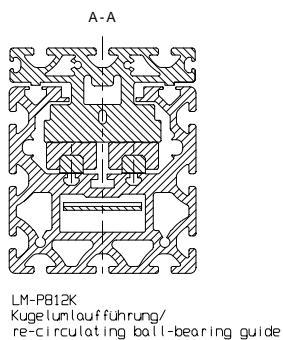
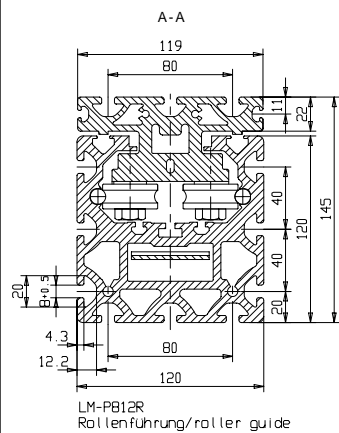


Motors for LM-P812

3-phase stepping motors	VRDM 31117	VRDM 31122
Max. torque	12 Nm	16,5 Nm
Motor mass	8 kg	11 kg

Motors with gearbox for LM-P812

3-phase stepping motor with gearbox 3:1 / 5:1	VRDM 31117 with PL100	VRDM 31122 with PL100
Max. torque	25.5 Nm	63.75 Nm
Mass	16.5 kg	19.5 kg



Die Gesamtlänge der H-Achse gilt in Kombination mit LM-P und LM-S Achsen.
The total length is intend in combination with LM-P and LM-A axis.

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:

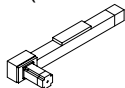
Contact _____
 Company _____
 Street/P.O. box _____
 City/postal code _____
 Phone _____
 Fax _____

Portal axis with motor LM-P812**Basic version**

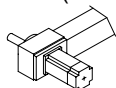
- ☐ LM-P812RT100
☐ LM-P812RT240
☐ LM-P812KT100
☐ LM-P812KT240

motor to be mounted on:

- ☐ right (standard) ☐ left

**Extended drive shaft stub**

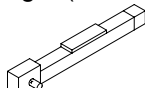
- ☐ without (standard) ☐ with

**Portal axis with shaft LM-S812****Basic version**

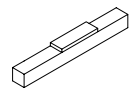
- ☐ LM-S812RT100
☐ LM-S812RT240
☐ LM-S812KT100
☐ LM-S812KT240

Shaft stub

- ☐ right (standard) ☐ left

**Supporting axis LM-H812****Basic version**

- ☐ LM-H812R
☐ LM-H812K

**Stainless version**

- ☐ no (standard)
☐ yes

Limit switch

- ☐ none
☐ two ☐ three

Stroke length

_____ mm (max.5600 mm)

Number of carriages

- ☐ one (standard)
☐ two, distance _____ mm

Carriage length

- ☐ 300 mm
 (standard)

**NOTE**

Additional axes available on request.

NOTE

You may use customer specific motors

**Standard motors for LM-P812****3-phase stepping motors**

- ☐ VRDM 31117 (12 Nm)
☐ VRDM 31122 (16.5 Nm)

3-phase stepping motors with gearbox

- ☐ VRDM 31117 with PL100 (3:1) (28.5 Nm)
☐ VRDM 31122 with PL100 (5:1) (63.75 Nm)

Motor connection

- ☐ with connector
☐ with terminal box

Motor options

- ☐ with encoder (only for motors with connector)

Remarks: