

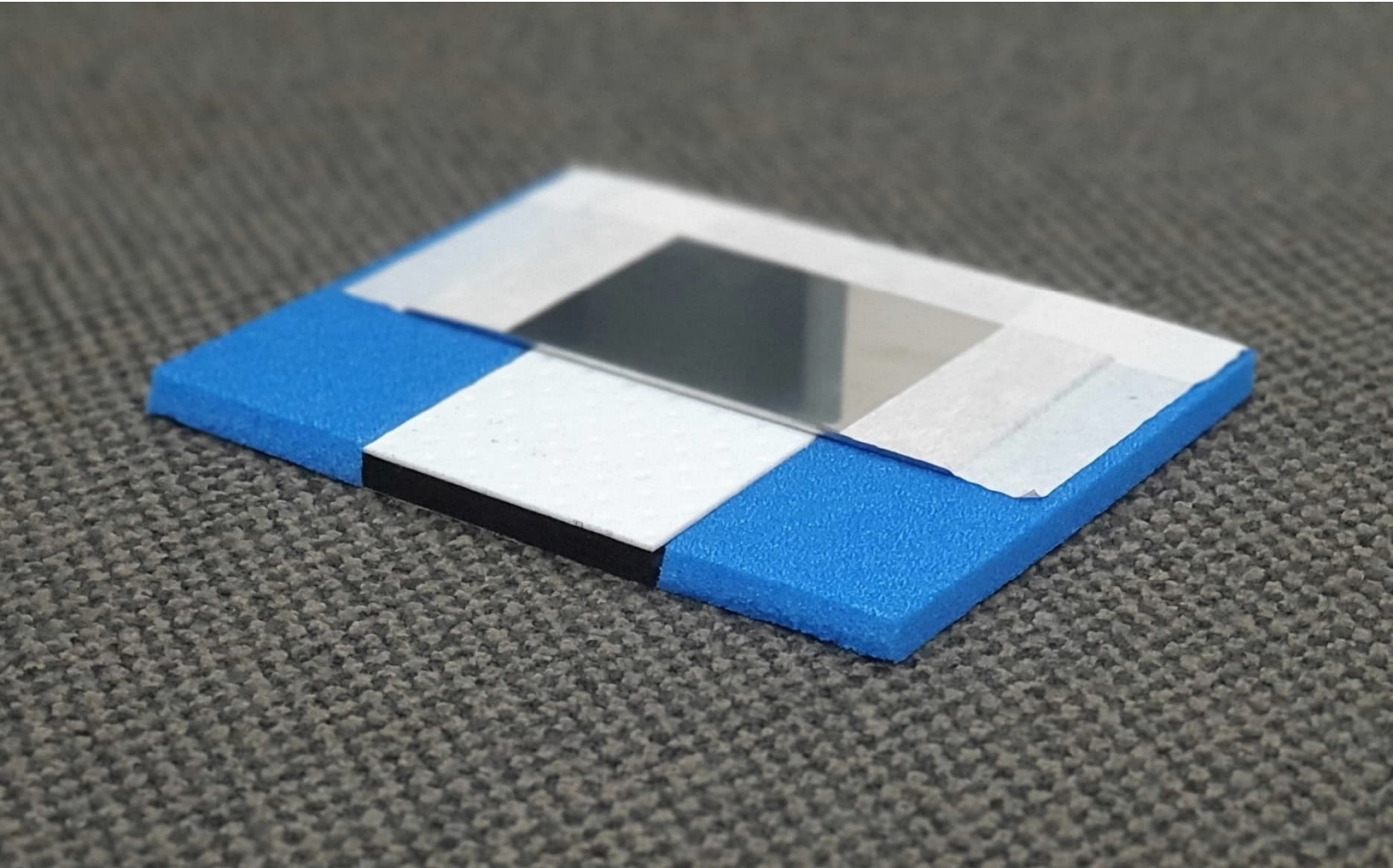


Bearings

Infrastructure | Buildings | Industrial structures

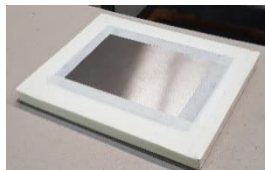
# mageba LASTO®SLIP

## Slip Joints for Engineering Structures



## LASTO®SLIP

Standard Slip joint  
High Performance Slip joint  
Passive Fire Rated Slip Joint



**mageba**



## Bearings

# mageba Slip Joints Standard, High Performance & Passive Fire Rated- LASTO®SLIP

## Principle

LASTO®SLIP linear bearings are an effective, permanent means of avoiding damage to buildings such as cracks in the structure.

The high-quality elastomeric core, the special silicone grease, the low-friction, impact-resistant sliding plate and the PTFE (Teflon) coatings have been formulated to suit practical requirements and tested successfully.

LASTO®SLIP linear bearings are produced entirely from high-quality materials and therefore comply with the most stringent durability and low friction requirements.

The LASTO®SLIP bearing for building work provides a solution of lasting high quality for many applications.

## Components

LASTO®SLIP LS-N bearing consists of a TEFLON coated elastomeric load-bearing core and a steel sliding plate resting on it. To ensure minimum friction, this plate has a specially treated, smooth surface. Thanks to the low friction between these high-quality bearing components, the excellent sliding action is maintained permanently and reliably.

LASTO®SLIP LS-HP & LS-PF are reinforced elastomeric bearings with a PTFE sliding layer vulcanised onto one side. The PTFE surface is matched with a sliding plate made from buffed stainless steel, with a specially-treated smooth surface texture, designed to achieve minimum friction coefficients.

LASTO®SLIP LS-HP (Standard Foam Edge) and LS-PF (Fire Rated Felt Edge) sliding point bearings are designed to absorb high vertical loads, torsion of the bearing surfaces, and horizontal displacements in the longitudinal and transverse directions with the minimum possible friction.

## Area of application

LASTO®SLIP LS-N, LS-HP and LS-PF linear bearings are used wherever structural loads, movements and rotation have to be controlled and transmitted with a minimum of resistance.

LASTO®SLIP LS-N, LS-HP and LS-PF linear bearings improve structural quality by preventing undesirable edge loads, and help to guarantee long building life. Countless buildings such as apartment blocks, houses,

parking garages and shopping centres have already been equipped with LASTO®SLIP linear bearings.

LASTO®SLIP (LS-N, LS-HP & LS-PF) provides high quality support for floor/ceiling slabs on walls, columns, brackets and for pre-stressed ceilings. It is an ideal support bearing for structural steelwork and timber structures, pipelines, machinery and reservoirs or water tanks.

Despite a low bearing height, the sliding layer permits significant displacements. The forces to be absorbed are transmitted properly to the supporting structure, and rotations are absorbed through elasticity.

## Types

### LS-N- Standard bearing

LASTO®SLIP Type LS-N permanent sliding and deformation bearings are linear bearings with good deformation and sliding capability, which enables them to absorb displacements. Their sliding capability enables them to absorb considerable horizontal movements and large movements, which mainly occur during the construction phase (shrinkage, creep), are made possible by the specific design of these bearings, with their very low friction values.

### LS HP & LS-PF, High Performance & Passive Fire Rated

LASTO®SLIP LS-HP and LS-PF are designed particularly to cater high performance and movement criteria. The building's structure, and in particular the freshly constructed walls, are protected most effectively by these bearings against micro-cracking in the masonry joints. The lubricating pockets in the elastomeric core, which are filled with a special grease, ensure the permissible range of movement at low friction for many years after installation.

The LS-PF Slip Joint comes in a Fire Rated Felt on either side of the core which acts as a barrier.

The Fire LS-Nter® Expanding Felt of the LS-PF Slip Joint expands up to three times its original thickness immediately when exposed to heat.

The LS-HP Slip Joint has a similar core to LS-PF, but with standard edge foam.

The Fire Rated Felt is certified to AS.4072.1-2005 Components to protect openings in fire-resistant separating elements Part 1: Service penetrations and control joints section 3.1 Fire resistance testing. Testing of which was conducted per AS.1530.4-2014 "Methods for fire tests on building materials, components, and structures, Part 4 Fire-resistance tests of elements of construction, Section 10: Service penetrations and control joints" and is Certified to AS.1530.4:2014 Section 10 "Service Penetrations and Control Joints" for horizontal control joints up to 90mm wide.

## Movement Capacity

The standard movement capacity of a LASTO®SLIP sliding bearing can be found in tables followed by this description.

The installation dimensions of the fully fabricated bearing can be freely specified within certain limits, but must be at least as big as the sliding plate. To prevent the bearing from becoming displaced from its position on the supporting structure, a minimum pressure of 0.5 N/mm<sup>2</sup> is required. Edge distance from load-bearing core: min 30 mm.

## Rotation

The bearing's maximum permissible rotation angle,  $\alpha$ , can be calculated using the following equations:

perm.  $\alpha = (0.2 \times 5/a) \times 1000$  where a is the bearing core length [mm] perpendicular to the rotation axis. Should larger angles of rotation be required, we recommend the use of our LASTO®SLIP bearing.

For LS-N it is  $=0.2 \times 3/a$  (1000)



Bearings

# Technical Data

LASTO®SLIP  
Standard-LS-N

Type LASTO®SLIP	Max. characteristic gravity (SLS) load	Max. horizontal movement	Height of bearing	Elastomeric core dimension	Max. angle of rotation mrad
	A	V	H		
	kN/m	mm	mm		
LS-N-80-20-130	80	20	7	30	20
LS-N-80-30-150	80	30	7	30	20
LS-N-80-50-190	80	50	7	30	20
LS-N-120-20-130	120	20	7	30	20
LS-N-120-30-150	120	30	7	30	20
LS-N-120-50-190	120	50	7	30	20
LS-N-175-22-150	175	22.5	7	45	13
LS-N-175-32-170	175	32.5	7	45	13
LS-N-175-52-210	175	52.5	7	45	13
LS-N-215-20-150	215	20	7	50	12
LS-N-215-30-170	215	30	7	50	12
LS-N-215-50-210	215	50	7	50	12
LS-N-255-20-155	255	20	7	55	11
LS-N-255-30-175	255	32.5	7	55	11
LS-N-255-52-220	255	52.5	7	55	11
LS-N-310-30-165	310	20	7	65	9
LS-N-310-30-185	310	30	7	65	9
LS-N-310-50-225	310	50	7	65	9
LS-N-410-15-185	410	20	7	85	7
LS-N-410-30-205	410	30	7	85	7
LS-N-410-50-245	410	50	7	85	7
LS-N-520-15-210	520	20	7	110	5
LS-N-520-30-235	520	32.5	7	110	5
LS-N-520-50-270	520	50	7	110	5

LASTO®SLIP  
High Performance  
LS-HP

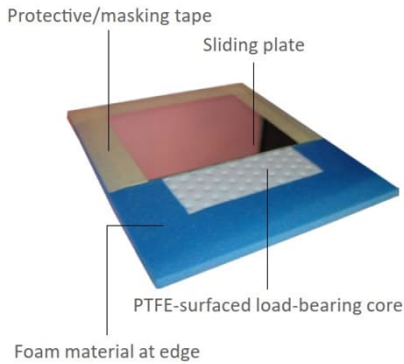
Type LASTO SLIP	Max. characteristic gravity (SLS) load	Max Horizontal movement	Height of bearing	Elastomeric core dimension	Max. angle of rotation mrad
	A	V	H		
	kN/m	mm	mm		
LS-HP-600-25-150	600	25	13	40	25
LS-HP-600-55-210	600	55	13	40	25
LS-HP-600-105-310	600	105	13	40	25
LS-HP-750-25-160	750	25	13	50	20
LS-HP-750-55-220	750	55	13	50	20
LS-HP-750-105-320	750	105	13	50	20
LS-HP-1050-25-180	1050	25	13	70	14
LS-HP-1050-55-240	1050	55	13	70	14
LS-HP-1050-105-340	1050	105	13	70	14
LS-HP-1275-25-195	1275	25	13	85	12
LS-HP-1275-55-255	1275	55	13	85	12
LS-HP-1275-105-355	1275	105	13	85	12
LS-HP-1500-25-210	1500	25	13	100	10
LS-HP-1500-55-270	1500	55	13	100	10
LS-HP-1500-105-370	1500	105	13	100	10
LS-HP-1800-25-230	1800	25	13	120	8
LS-HP-1800-55-290	1800	55	13	120	8
LS-HP-1800-105-390	1800	105	13	120	8
LS-HP-2025-25-245	2025	25	13	135	7
LS-HP-2025-55-305	2025	55	13	135	7
LS-HP-2025-105-405	2025	105	13	135	7
LS-HP-2550-25-280	2550	25	13	170	6
LS-HP-2550-55-340	2550	55	13	170	6
LS-HP-2550-105-440	2550	105	13	170	6



Bearings

# Technical Data

LASTO®SLIP  
Passive Fire Rated  
LS-PF



Type LASTO®SLIP	Max. Characteristic gravity (SLS) load	Max. horizontal movement	Height of bearing	Elastomeric core dimension	Max. angle of rotation mrad
	A	V	H		
	kN/m	mm	mm	mm	mrad
LS-PF-600-55-210	600	55	13	40	25
LS-PF-600-105-310	600	105	13	40	25
LS-PF-750-55-220	750	55	13	50	20
LS-PF-750-105-320	750	105	13	50	20
LS-PF-1050-55-240	1050	55	13	70	14
LS-PF-1050-105-340	1050	105	13	70	14
LS-PF-1275-55-255	1275	55	13	85	12
LS-PF-1275-105-355	1275	105	13	85	12
LS-PF-1500-55-270	1500	55	13	100	10
LS-PF-1500-105-370	1500	105	13	100	10
LS-PF-1800-55-290	1800	55	13	120	8
LS-PF-1800-105-390	1800	105	13	120	8
LS-PF-2025-55-305	2025	55	13	135	7
LS-PF-2025-105-405	2025	105	13	135	7
LS-PF-2550-55-340	2550	55	13	170	6
LS-PF-2550-105-440	2550	105	13	170	6

## Reference projects



Amiens, FR



Stuttgart City Library, DE



Convention Center, HK



Shopping mall Glatt, CH



Airport Hurghada, EG



Stade de Suisse, CH

## Product group



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