

## SLAB-030 to SLAB-300

### Energy absorption in pad format

#### Confectioning and Combinable

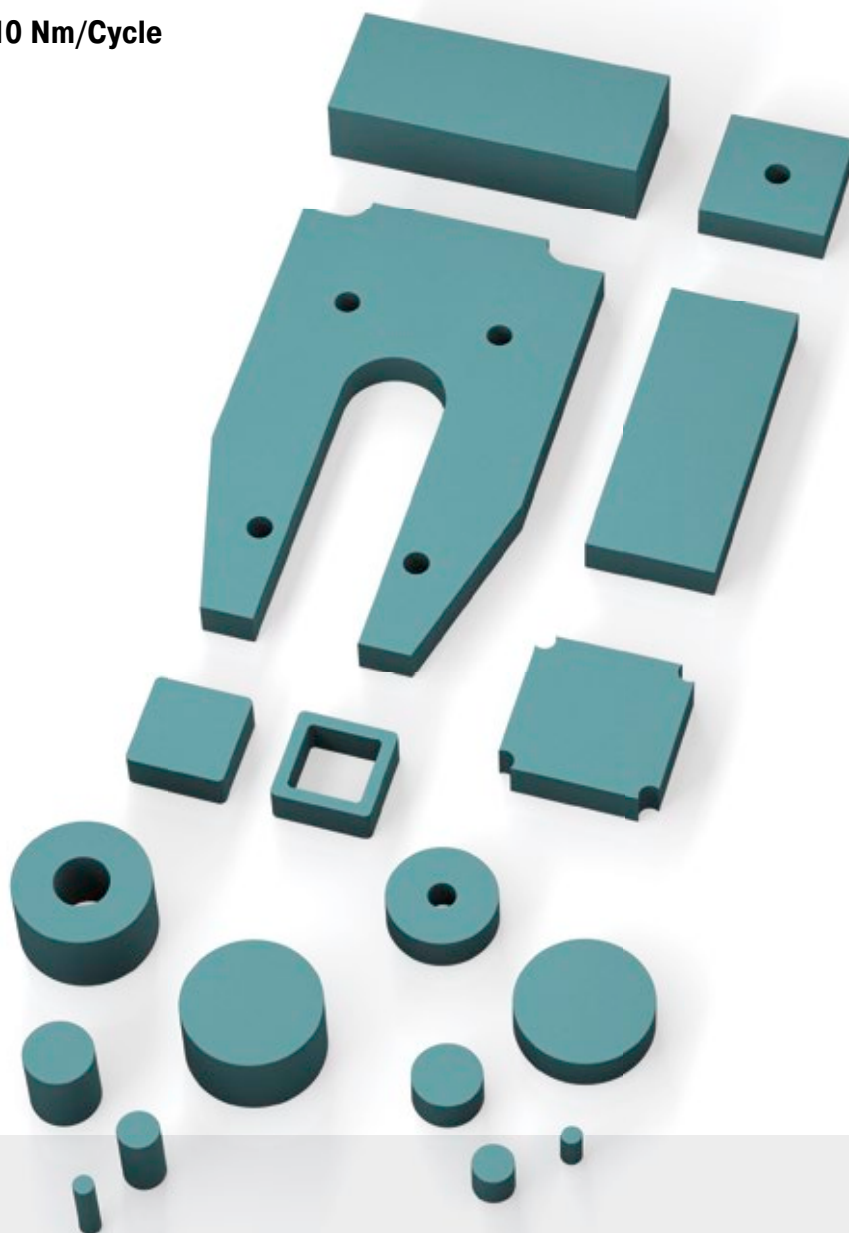
**Energy capacity 3.1 Nm/Cycle to 210 Nm/Cycle**

**Stroke 6 mm to 12 mm**

Tailor made damping material in pad format: SLAB damping pads are made of a viscoelastic PUR-material. They absorb impact loads extremely effectively and are also suitable for insulating or damping vibration.

The pad series SL-030 to SL-300 are quickly adapted to the relevant type of application. This is in part achieved through the configuration of the calculating tool or directly by the ACE specialist engineers. Furthermore, this is possible because the standard material can be cut exactly and quickly to any customer requirement with our new cutting system. It is also possible to obtain a sample to find an optimum solution.

The SLAB damping pads are proven impact or collision protection. They are used on luggage and transport belts, conveyor systems, pneumatic, electromechanical and hydraulic drives as well as on linear carriages.



#### Technical Data

**Energy capacity:** 3.1 Nm/Cycle to 210 Nm/Cycle

**Standard density:**

SL-030 = approx. 220 kg/m<sup>3</sup>

SL-100 = approx. 440 kg/m<sup>3</sup>

SL-300 = approx. 680 kg/m<sup>3</sup>

**Standard colour:** Green

**Dimensions:**

Widths: up to 1,500 mm

Lengths: up to 5,000 mm

Thicknesses: 12.5 mm and 25 mm

**Environment:** Resistant against ozone and UV radiation. Chemical resistancy on request.

**Operating temperature range:** -5 °C to +50 °C

**Material:** Profile body: Mixed cellular PUR-Elastomer (polyurethane)

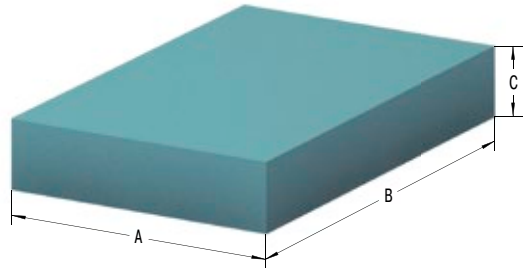
**Application field:** Linear slides, Handling modules, Luggage and transport belts, Impact panels, Pipeline insulation, Foundation mounting, Conveyor technology, Electronic systems and controls, Medical technology

**Note:** Possibilities for cutting: Water jet cutting, stamping, splitting, sawing and drilling

**Safety instructions:** Fire rating: B2, normally flammable, according to DIN 4102

**On request:** Special versions with further dimensions such as thicknesses, colours, shapes and drawing parts e.g. curves. Different wear layers.

### SL-030-12

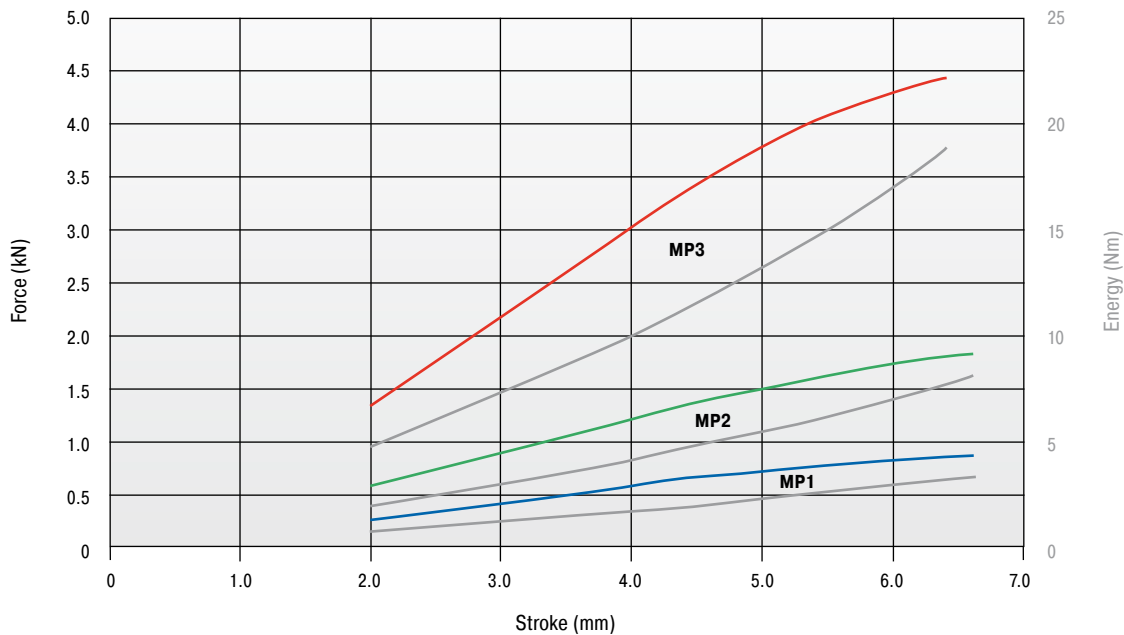


### Characteristics

#### Type SL-030-12

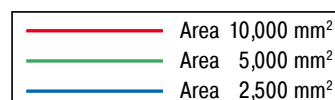
#### Force-Stroke Characteristic (dynamic)

#### Stroke Utilization 6.5 mm



#### Load data

Dynamic load, impact velocity: approx. 1 m/s



The chosen damping plate should be tested by the customer on the specific application.

#### Ordering Example

ACE-SLAB \_\_\_\_\_  
 Material Type \_\_\_\_\_  
 Material Thickness 12.5 mm \_\_\_\_\_  
 Customers Specific Dimension/Shape \_\_\_\_\_  
 (D-Number is assigned by ACE)

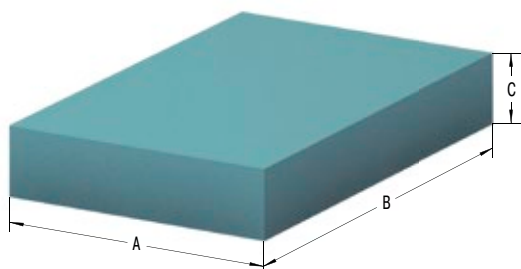
SL-030-12-Dxxxx

### Performance and Dimensions

| TYPES           | <sup>1</sup> W <sub>3</sub> max.<br>Nm/cycle | <sup>1</sup> Stroke<br>mm | A<br>mm | B<br>mm | C<br>mm | Area<br>mm <sup>2</sup> | Standard density<br>kg/m <sup>3</sup> | Return Time<br>s | Weight<br>kg |
|-----------------|----------------------------------------------|---------------------------|---------|---------|---------|-------------------------|---------------------------------------|------------------|--------------|
| SL-030-12-D-MP1 | 3.1                                          | 6.5                       | 50.0    | 50.0    | 12.5    | 2,500                   | 200                                   | 4                | 0.006        |
| SL-030-12-D-MP2 | 8.0                                          | 6.5                       | 70.7    | 70.7    | 12.5    | 5,000                   | 200                                   | 4                | 0.013        |
| SL-030-12-D-MP3 | 19.0                                         | 6.5                       | 100.0   | 100.0   | 12.5    | 10,000                  | 200                                   | 4                | 0.025        |

<sup>1</sup> Maximum energy absorption in terms of area graded pad sizes as a reference for the correct selection of material and pad size. The energy absorption depends on the individual impact surface and stroke utilization.

## SL-030-25

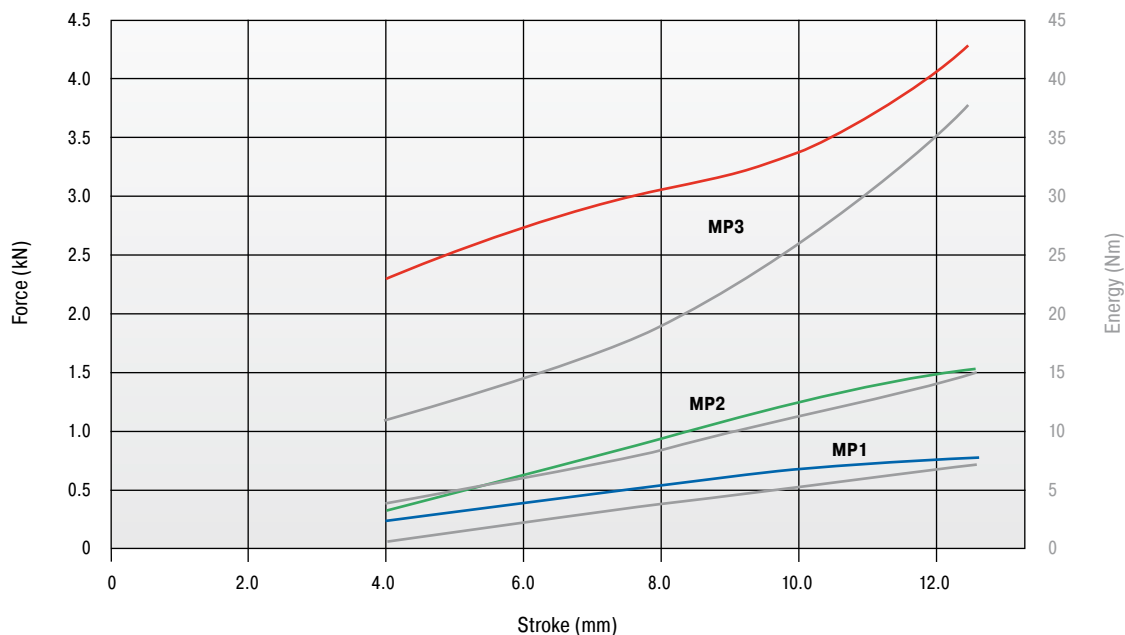


## Characteristics

## Type SL-030-25

## Force-Stroke Characteristic (dynamic)

## Stroke Utilization 12.5 mm



## Load data

Dynamic load, impact velocity: approx. 1 m/s



The chosen damping plate should be tested by the customer on the specific application.

## Ordering Example

ACE-SLAB \_\_\_\_\_  
 Material Type \_\_\_\_\_  
 Material Thickness 25 mm \_\_\_\_\_  
 Customers Specific Dimension/Shape \_\_\_\_\_  
 (D-Number is assigned by ACE)

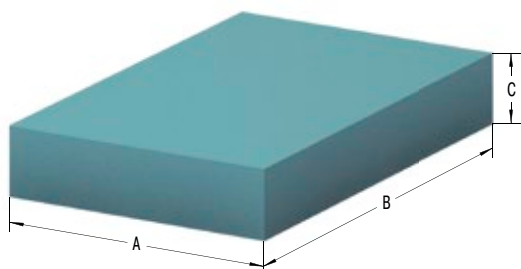
SL-030-25-Dxxxx

## Performance and Dimensions

| TYPES           | <sup>1</sup> W <sub>3</sub> max.<br>Nm/cycle | <sup>1</sup> Stroke<br>mm | A<br>mm | B<br>mm | C<br>mm | Area<br>mm <sup>2</sup> | Standard density<br>kg/m <sup>3</sup> | Return Time<br>s | Weight<br>kg |
|-----------------|----------------------------------------------|---------------------------|---------|---------|---------|-------------------------|---------------------------------------|------------------|--------------|
| SL-030-25-D-MP1 | 6.7                                          | 12.5                      | 50.0    | 50.0    | 25.0    | 2,500                   | 200                                   | 5                | 0.013        |
| SL-030-25-D-MP2 | 15.0                                         | 12.5                      | 70.7    | 70.7    | 25.0    | 5,000                   | 200                                   | 5                | 0.025        |
| SL-030-25-D-MP3 | 42.0                                         | 12.5                      | 100.0   | 100.0   | 25.0    | 10,000                  | 200                                   | 5                | 0.050        |

<sup>1</sup> Maximum energy absorption in terms of area graded pad sizes as a reference for the correct selection of material and pad size. The energy absorption depends on the individual impact surface and stroke utilization.

### SL-100-12

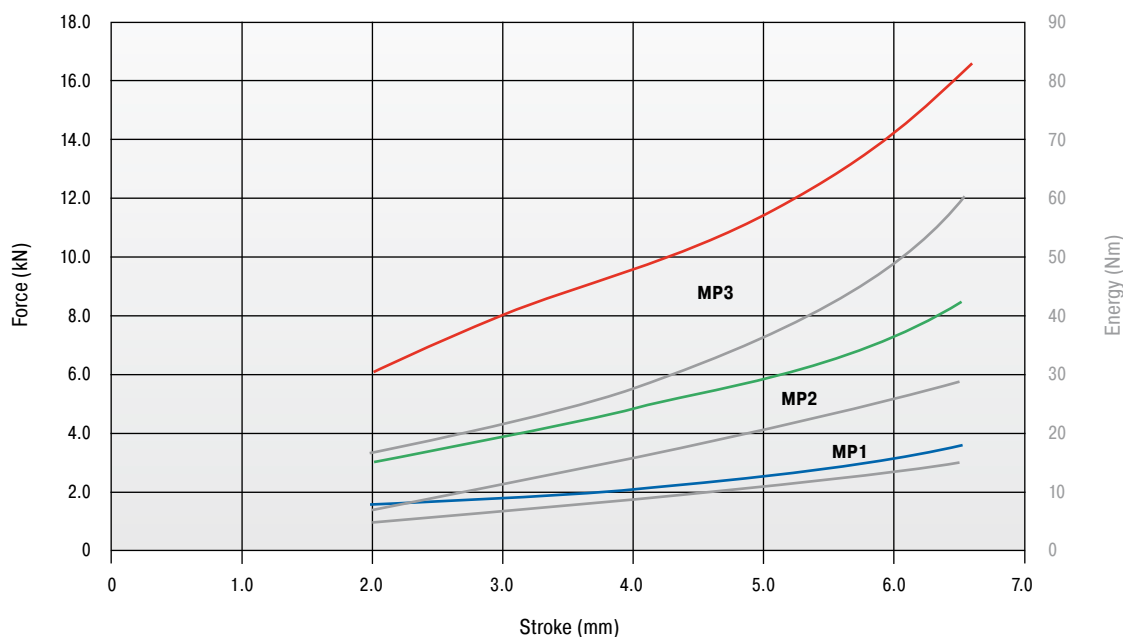


### Characteristics

#### Type SL-100-12

#### Force-Stroke Characteristic (dynamic)

#### Stroke Utilization 6.5 mm



#### Load data

Dynamic load, impact velocity: approx. 1 m/s



The chosen damping plate should be tested by the customer on the specific application.

#### Ordering Example

ACE-SLAB \_\_\_\_\_  
 Material Type \_\_\_\_\_  
 Material Thickness 12.5 mm \_\_\_\_\_  
 Customers Specific Dimension/Shape \_\_\_\_\_  
 (D-Number is assigned by ACE)

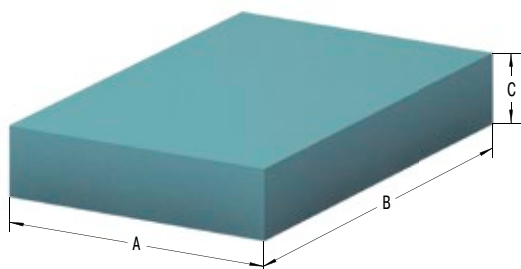
SL-100-12-Dxxxx

### Performance and Dimensions

| TYPES           | <sup>1</sup> W <sub>3</sub> max.<br>Nm/cycle | <sup>1</sup> Stroke<br>mm | A<br>mm | B<br>mm | C<br>mm | Area<br>mm <sup>2</sup> | Standard density<br>kg/m <sup>3</sup> | Return Time<br>s | Weight<br>kg |
|-----------------|----------------------------------------------|---------------------------|---------|---------|---------|-------------------------|---------------------------------------|------------------|--------------|
| SL-100-12-D-MP1 | 15.0                                         | 6.5                       | 50.0    | 50.0    | 12.5    | 2,500                   | 440                                   | 4                | 0.014        |
| SL-100-12-D-MP2 | 30.0                                         | 6.5                       | 70.7    | 70.7    | 12.5    | 5,000                   | 440                                   | 4                | 0.028        |
| SL-100-12-D-MP3 | 60.0                                         | 6.5                       | 100.0   | 100.0   | 12.5    | 10,000                  | 440                                   | 4                | 0.055        |

<sup>1</sup> Maximum energy absorption in terms of area graded pad sizes as a reference for the correct selection of material and pad size. The energy absorption depends on the individual impact surface and stroke utilization.

## SL-100-25

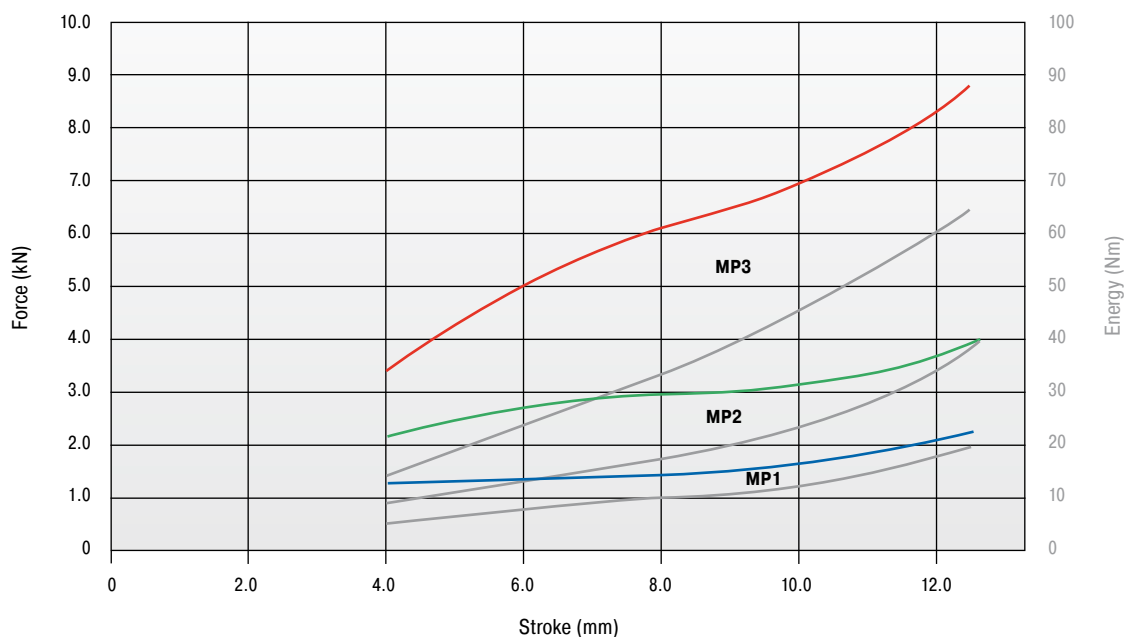


## Characteristics

## Type SL-100-25

## Force-Stroke Characteristic (dynamic)

## Stroke Utilization 12.5 mm



## Load data

Dynamic load, impact velocity: approx. 1 m/s



The chosen damping plate should be tested by the customer on the specific application.

## Ordering Example

ACE-SLAB \_\_\_\_\_  
 Material Type \_\_\_\_\_  
 Material Thickness 25 mm \_\_\_\_\_  
 Customers Specific Dimension/Shape \_\_\_\_\_  
 (D-Number is assigned by ACE)

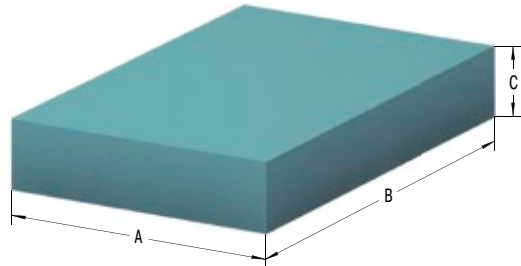
SL-100-25-Dxxxx

## Performance and Dimensions

| TYPES           | <sup>1</sup> W <sub>3</sub> max.<br>Nm/cycle | <sup>1</sup> Stroke<br>mm | A<br>mm | B<br>mm | C<br>mm | Area<br>mm <sup>2</sup> | Standard density<br>kg/m <sup>3</sup> | Return Time<br>s | Weight<br>kg |
|-----------------|----------------------------------------------|---------------------------|---------|---------|---------|-------------------------|---------------------------------------|------------------|--------------|
| SL-100-25-D-MP1 | 20.0                                         | 12.5                      | 50.0    | 50.0    | 25.0    | 2,500                   | 440                                   | 5                | 0.028        |
| SL-100-25-D-MP2 | 40.0                                         | 12.5                      | 70.7    | 70.7    | 25.0    | 5,000                   | 440                                   | 5                | 0.055        |
| SL-100-25-D-MP3 | 63.0                                         | 12.5                      | 100.0   | 100.0   | 25.0    | 10,000                  | 440                                   | 5                | 0.110        |

<sup>1</sup> Maximum energy absorption in terms of area graded pad sizes as a reference for the correct selection of material and pad size. The energy absorption depends on the individual impact surface and stroke utilization.

### SL-300-12

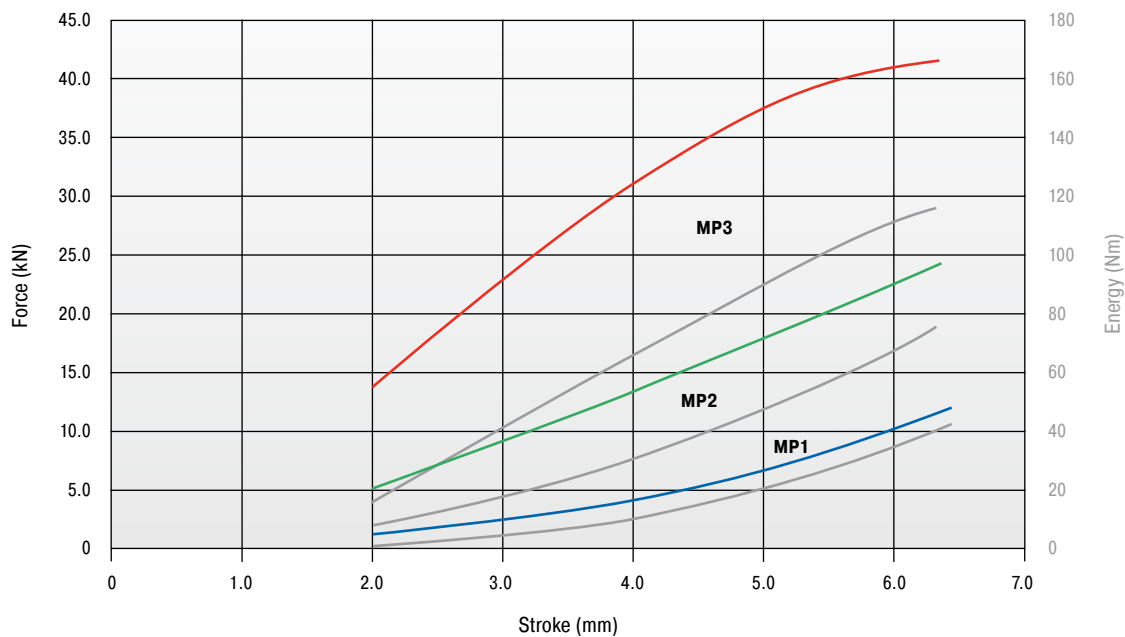


### Characteristics

#### Type SL-300-12

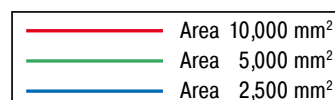
#### Force-Stroke Characteristic (dynamic)

#### Stroke Utilization 6.5 mm



#### Load data

Dynamic load, impact velocity: approx. 1 m/s



The chosen damping plate should be tested by the customer on the specific application.

#### Ordering Example

ACE-SLAB \_\_\_\_\_  
 Material Type \_\_\_\_\_  
 Material Thickness 12.5 mm \_\_\_\_\_  
 Customers Specific Dimension/Shape \_\_\_\_\_  
 (D-Number is assigned by ACE)

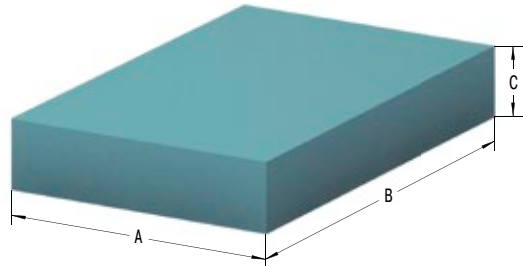
SL-300-12-Dxxxx

### Performance and Dimensions

| TYPES           | <sup>1</sup> W <sub>3</sub> max.<br>Nm/cycle | <sup>1</sup> Stroke<br>mm | A<br>mm | B<br>mm | C<br>mm | Area<br>mm <sup>2</sup> | Standard density<br>kg/m <sup>3</sup> | Return Time<br>s | Weight<br>kg |
|-----------------|----------------------------------------------|---------------------------|---------|---------|---------|-------------------------|---------------------------------------|------------------|--------------|
| SL-300-12-D-MP1 | 38.0                                         | 6.5                       | 50.0    | 50.0    | 12.5    | 2,500                   | 680                                   | 3                | 0.021        |
| SL-300-12-D-MP2 | 65.0                                         | 6.5                       | 70.7    | 70.7    | 12.5    | 5,000                   | 680                                   | 3                | 0.043        |
| SL-300-12-D-MP3 | 121.0                                        | 6.5                       | 100.0   | 100.0   | 12.5    | 10,000                  | 680                                   | 3                | 0.085        |

<sup>1</sup> Maximum energy absorption in terms of area graded pad sizes as a reference for the correct selection of material and pad size. The energy absorption depends on the individual impact surface and stroke utilization.

## SL-300-25

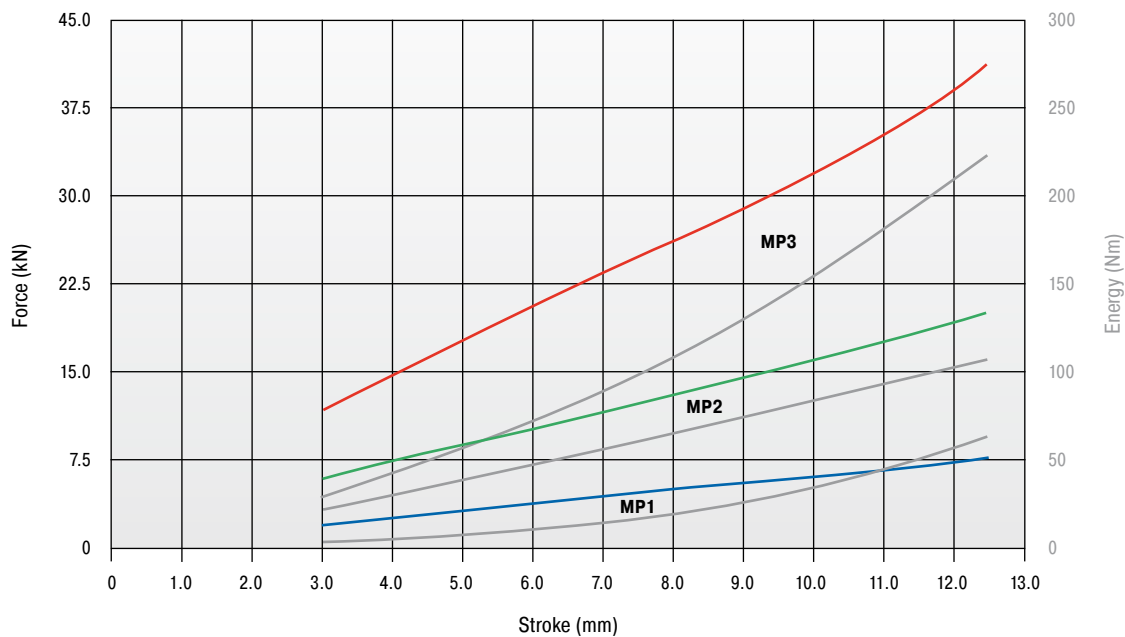


## Characteristics

## Type SL-300-25

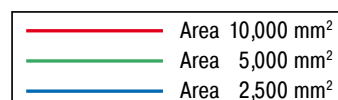
## Force-Stroke Characteristic (dynamic)

## Stroke Utilization 12.5 mm



## Load data

Dynamic load, impact velocity: approx. 1 m/s



The chosen damping plate should be tested by the customer on the specific application.

## Ordering Example

ACE-SLAB \_\_\_\_\_  
 Material Type \_\_\_\_\_  
 Material Thickness 25 mm \_\_\_\_\_  
 Customers Specific Dimension/Shape \_\_\_\_\_  
 (D-Number is assigned by ACE)

SL-300-25-Dxxxx

## Performance and Dimensions

| TYPES           | <sup>1</sup> W <sub>3</sub> max.<br>Nm/cycle | <sup>1</sup> Stroke<br>mm | A<br>mm | B<br>mm | C<br>mm | Area<br>mm <sup>2</sup> | Standard density<br>kg/m <sup>3</sup> | Return Time<br>s | Weight<br>kg |
|-----------------|----------------------------------------------|---------------------------|---------|---------|---------|-------------------------|---------------------------------------|------------------|--------------|
| SL-300-25-D-MP1 | 59.0                                         | 12.5                      | 50.0    | 50.0    | 25.0    | 2,500                   | 680                                   | 4                | 0.043        |
| SL-300-25-D-MP2 | 101.0                                        | 12.5                      | 70.7    | 70.7    | 25.0    | 5,000                   | 680                                   | 4                | 0.085        |
| SL-300-25-D-MP3 | 210.0                                        | 12.5                      | 100.0   | 100.0   | 25.0    | 10,000                  | 680                                   | 4                | 0.170        |

<sup>1</sup> Maximum energy absorption in terms of area graded pad sizes as a reference for the correct selection of material and pad size. The energy absorption depends on the individual impact surface and stroke utilization.

## Bonding of Polyurethane (PUR) Elastomers

Cellular and compact parts of polyurethane (PUR) elastomers SLAB damping pads can be bonded according to the following recommendations. If treatment instructions are followed, the strengths of the bonded joint can be equivalent to the elastomer material itself.

### 1. General Information

To achieve the required bonding strength it is necessary to ensure the correct adhesive is chosen for each individual application.

#### Contact bonding material

Thin adhesive film, with little filling of the gaps. Correcting or moving of the areas covered with bonding material is no longer possible after the first contact is made (contact effect).

Once a bonding is separated, the bonding process must be renewed.

Please note that creases, ripples or blisters cannot be straightened once the contact is made.

#### Hardening bonding material

(As thin as possible) the film of glue fills the joint. The gluing can be done after the edges are brought together.

### 2. Preparation

The preparation of bonding surfaces is of significant importance for the bonding strength. The surfaces must be adapted to each other and available in plain, clean form.

#### Careful removal of

Adhesive remnants, oil, fat, separating agents, dirt, dust, scales, molding layers, protective coating, finish, paint, sweat etc.

#### Mechanical support

Stripping, brushing, scraping, grinding, sandblasting.

#### Chemical support

Degreasing (washing off with grease remover), etching, priming; pay attention to chemical resistancy on the following page!

In general, SLAB damping pads in sheet form can be bonded without pretreatment. Molded parts, with or without special skin, have to be cleaned from left-over separating agents, if necessary by grinding. When bonding with other materials like plastic, wood, metal or concrete, mechanical and/or chemical additives have to be used.

The adhesive has to be prepared according to the formula, observing the manufacturer's recommendations. The adhesive film is also to be carefully applied pursuant to these details. (Tools: brush, spatula, adhesive spreader, airless spray gun).

#### Contact bonding material

Apply the non-gap-filling adhesive film to both bonding surfaces – the thinner, the better. To close the pores of low density materials, two layers may be necessary.

#### Hardening bonding material

Apply evenly. Possible irregularities can be compensated by the film thickness.

### 3. Bonding

When using contact bonding material, the flash off time has to be kept in mind. Especially, with systems containing water instead of usual solvents, the adhesive film must be as dry as possible in order to pass the 'finger test' – no marks appear when touching the adhesive surface. When using hardening bonding material, the parts have to be joined immediately after applying the bonding material.

### 4. Pressing

#### Contact bonding material

Contact pressure up to 0.5 N/mm<sup>2</sup>

#### Hardening bonding material

Fix firmly

It is important to carefully follow the manufacturer's instructions with regard to processing temperature, hardening time and earliest possible loading.

### 5. Selection of Approved Bonding Materials

Because of the variety of materials that can be bonded together as well as numerous suitable bonding materials, we refer you to a worldwide leading producer of bonding and sealing materials.

Sika Deutschland GmbH  
Kornwestheimer Straße 103–107  
D-70439 Stuttgart  
T +49 (0)711 - 8009-0  
F +49 (0)711 - 8009-321  
info@de.sika.com  
http://www.sika.de

## Chemical Resistance

### Test (following DIN 53428)

Exposure time of the medium: 6 weeks at room temperature, but for concentrated acids and bases as well as solvents: 7 days at room temperature

### Evaluation Criteria

Changing of tensile strength and elongation of break (dry samples), change in volume

### Evaluation Standard

|                                 |                                                 |
|---------------------------------|-------------------------------------------------|
| <b>1 Excellent resistance</b>   | change in characteristics <10 %                 |
| <b>2 Good resistance</b>        | change in characteristics between 10 % and 20 % |
| <b>3 Conditional resistance</b> | change in characteristics partly above 20 %     |
| <b>4 Not resistant</b>          | change in characteristics all above 20 %        |

All information is based on our current knowledge and experiences. We reserve the rights for changes towards product refinement.

### Chemical Resistance

#### Water/Watery Solutions SL-030 to SL-300

|                          |   |
|--------------------------|---|
| Water                    | 1 |
| Iron (III) chloride 10 % | 1 |
| Sodium carbonate         | 1 |
| Sodium chlorate 10 %     | 1 |
| Sodium chloride 10 %     | 1 |
| Sodium nitrate 10 %      | 1 |
| Tensides (div.)          | 1 |
| Hydrogen peroxide 3 %    | 1 |
| Laitance                 | 1 |

#### Oils and Greases

|                           |                                  |
|---------------------------|----------------------------------|
| ASTM Oil No. 1            | 1                                |
| ASTM Oil No. 3            | 1                                |
| Laitance                  | 2                                |
| Hydraulic oils            | depends on consistency/additives |
| Motor oil                 | 1                                |
| Formwork oil              | 1                                |
| High performance grease   | 1-2                              |
| Railroad switch lubricant | 1-2                              |

#### Acids and Bases

|                             |   |
|-----------------------------|---|
| Formic acid 5 %             | 3 |
| Acetic acid 5 %             | 2 |
| Phosphoric acid 5 %         | 1 |
| Nitric acid 5 %             | 4 |
| Hydrochloric acid 5 %       | 1 |
| Sulphuric acid 5 %          | 1 |
| Ammonia solution 5 %        | 1 |
| Caustic potash solution 5 % | 1 |
| Caustic soda solution 5 %   | 1 |

#### Solvents

#### SL-030 to SL-300

|                          |     |
|--------------------------|-----|
| Acetone                  | 4   |
| Diesel/Fuel oil          | 2   |
| Carburetor fuel/Benzine  | 3   |
| Glycerin                 | 1   |
| Glycols                  | 1-2 |
| Cleaning solvents/Hexane | 1   |
| Methanol                 | 3   |
| Aromatic hydrocarbons    | 4   |

#### Other Factors

|                             |     |
|-----------------------------|-----|
| Hydrolysis *                | 1   |
| Ozone                       | 1   |
| UV radiation and weathering | 1-2 |
| Biological resistance       | 1   |

\* 28 days, 70 °C, 95 % relative humidity

## Sample Pads and Sample Sets

### Sample Pads

| Part Number         | Dimensions and Type                                                             |
|---------------------|---------------------------------------------------------------------------------|
| SL-030-12-D-MP4     | 220 x 150 x 12.5 mm                                                             |
| SL-030-12-D-MP4-V+K | 220 x 150 x 12.5 mm + layer for wear protection 2 mm, self-adhesive on one side |
| SL-030-25-D-MP4     | 220 x 150 x 25 mm                                                               |
| SL-100-12-D-MP4     | 220 x 150 x 12.5 mm                                                             |
| SL-100-12-D-MP4-V+K | 220 x 150 x 12.5 mm + layer for wear protection 2 mm, self-adhesive on one side |
| SL-100-25-D-MP4     | 220 x 150 x 25 mm                                                               |
| SL-300-12-D-MP4     | 220 x 150 x 12.5 mm                                                             |
| SL-300-12-D-MP4-V+K | 220 x 150 x 12.5 mm + layer for wear protection 2 mm, self-adhesive on one side |
| SL-300-25-D-MP4     | 220 x 150 x 25 mm                                                               |
| SL-030-12-D-MP5     | 1500 x 800 x 12 mm                                                              |
| SL-030-25-D-MP5     | 1500 x 800 x 25 mm                                                              |
| SL-100-12-D-MP5     | 1500 x 800 x 12 mm                                                              |
| SL-100-25-D-MP5     | 1500 x 800 x 25 mm                                                              |
| SL-300-12-D-MP5     | 1500 x 800 x 12 mm                                                              |
| SL-300-25-D-MP5     | 1500 x 800 x 25 mm                                                              |

### Sample Sets

Individually arranged sample sets are available on request!  
3 densities. Dimensions: 50 x 50 mm, 70.7 x 70.7 mm and 100 x 100 mm. Thickness: 12.5 and 25 mm

### Set "Sizes"

comprising 1 model, 1 type of thickness, 3 sizes = 3 sample pads

| Part Number | Content               | Dimensions                                 |
|-------------|-----------------------|--------------------------------------------|
| SL-SET-1.1  | SL-030-12-MP1 bis MP3 | 50 x 50 mm / 70.7 x 70.7 mm / 100 x 100 mm |
| SL-SET-1.2  | SL-030-25-MP1 bis MP3 | 50 x 50 mm / 70.7 x 70.7 mm / 100 x 100 mm |
| SL-SET-1.3  | SL-100-12-MP1 bis MP3 | 50 x 50 mm / 70.7 x 70.7 mm / 100 x 100 mm |
| SL-SET-1.4  | SL-100-25-MP1 bis MP3 | 50 x 50 mm / 70.7 x 70.7 mm / 100 x 100 mm |
| SL-SET-1.5  | SL-300-12-MP1 bis MP3 | 50 x 50 mm / 70.7 x 70.7 mm / 100 x 100 mm |
| SL-SET-1.6  | SL-300-25-MP1 bis MP3 | 50 x 50 mm / 70.7 x 70.7 mm / 100 x 100 mm |

### Set "Types"

comprising 3 models, 1 type of thickness, 1 size = 3 sample plates

| Part Number | Content                                           | Dimensions     |
|-------------|---------------------------------------------------|----------------|
| SL-SET-2.1  | SL-030-12-D-MP1, SL-100-12-D-MP1, SL-300-12-D-MP1 | 50 x 50 mm     |
| SL-SET-2.2  | SL-030-25-D-MP1, SL-100-25-D-MP1, SL-300-25-D-MP1 | 50 x 50 mm     |
| SL-SET-2.3  | SL-030-12-D-MP2, SL-100-12-D-MP2, SL-300-12-D-MP2 | 70.7 x 70.7 mm |
| SL-SET-2.4  | SL-030-25-D-MP2, SL-100-25-D-MP2, SL-300-25-D-MP2 | 70.7 x 70.7 mm |
| SL-SET-2.5  | SL-030-12-D-MP3, SL-100-12-D-MP3, SL-300-12-D-MP3 | 100 x 100 mm   |
| SL-SET-2.6  | SL-030-25-D-MP3, SL-100-25-D-MP3, SL-300-25-D-MP3 | 100 x 100 mm   |