

SLAB 030 to SLAB 300 Damping Pads

Energy absorption in pad format

Can be converted and combined

Energy capacity 3.1 Nm/cycle to 210 Nm/cycle

Stroke 6.5 mm to 12.5 mm

SL-030-12

SL-030-25

SL-100-12

SL-100-25

SL-300-12

SL-300-25

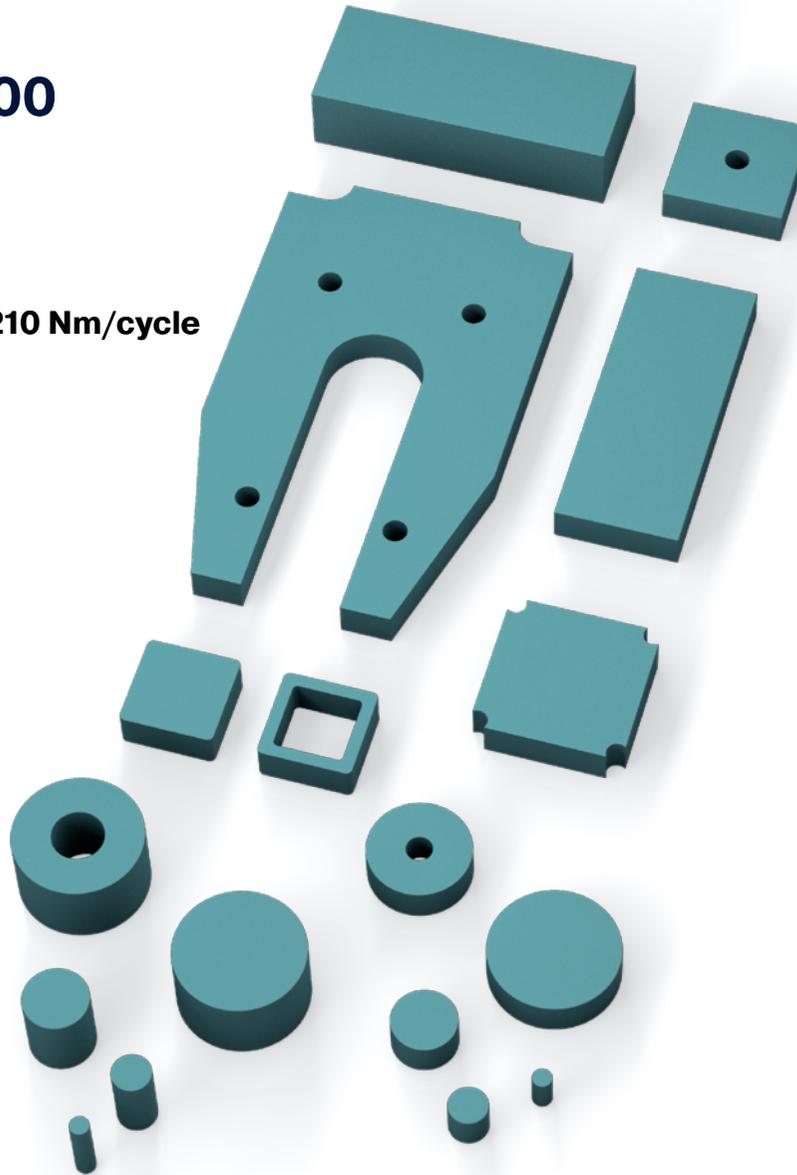


Table of contents	Page
General instructions.....	2
Safety information	2
Intended use.....	2
Description and function.....	2
Calculation and design	2
Delivery and storage	2
Maintenance and care	2
Disassembly and disposal.....	2
Mounting instructions.....	3 - 8
Warranty	9
Expected service life	9
Technical data.....	9
Bonding instructions	10

Manual

General instructions

This manual is for the disruption-free use of the product types listed on page 1; its compliance is a prerequisite for the fulfilment of any warranty claims.

Therefore, make sure to read this manual before use.

Please always maintain the specified limits from the performance table (technical data). Take into account the predominant environmental conditions and restrictions. Note the regulations of the trade association, TÜV or corresponding national, international and European regulations. Installation and commissioning only according to mounting instructions.

only be used for orientation.

Calculation and design

In order to ensure an optimum, fault-free and durable function of the damping pads they must be correctly dimensioned and designed. The following parameters must be known and used in the calculation:

- Moving mass [kg]
- Impact velocity of the mass on the damping pad(s) [m/s]
- Number of damping pads acting in parallel [n]
- Number of strokes or cycles per hour [1/h]

The max. cycle frequency is mainly determined by the return time of the respective damping pad (see performance table).

The specified performance data and dimensions for the damping pads used can be found in the performance table. Energy capacity and stroke utilisation relate to an adjusted free-falling mass with an impact velocity of approx. 1 m/s. In the case of deviating field data these values can only be used for orientation. The energy capacity is dependent upon the respective impact surface and stroke utilisation. With progressive load duration a reduction of this energy capacity is to be expected (material fatigue). The selected damping pad should be checked in the application by the customer.

For calculation, use our free calculation service by phoning: +49 (0)2173 - 9226-20.

Delivery and storage

The damping pads can become damaged upon opening the packaging. Do not use cutting tools if possible.

- After delivery please check the damping pads for any damage.
- Storage in the original packaging is preferred. If this is removed, dry storage must be ensured.

Safety information

WARNING

- ⚠ If ACE-SLAB damping pads are used where a failure of the product could lead to personal injuries and/or material damage, additional safety elements must be implemented.
- ⚠ Free-moving masses can lead to injuries by crushing during installation of the damping pads. Secure moving masses against inadvertent starting with suitable safety precautions before installing the damping pads.

Intended use

ACE-SLAB damping pads of the SL-030, SL-100 and SL-300 range are viscoelastic PUR-materials, which are manufactured using a patented formula and were developed especially for the absorption of impact loads.

They are used wherever moving masses do not have to be accurately stopped and the energy does not have to be completely absorbed. They are also used, for example, as damping elements for bulk materials. Special surface protection layers are to be used here, if necessary.

Description and function

ACE-SLAB damping pads are two-dimensional damping elements that can be produced according to customer-specific dimensions as required. Thanks to the viscoelastic behaviour of these materials the energy of impact loads is largely destroyed and converted into heat. The rebound elasticity under these load conditions is < 20 %. The rebound effect is particularly minimal for such applications. The energy capacity is dependent upon material, area and stroke. Higher density, greater impact surface and greater stroke allow a higher energy capacity and vice versa. Respective values for defined pad sizes can be found in the performance table (technical data). Because of the form factor (ratio of the impact surface to the circumferential interface) a linear extrapolation of this energy capacity is not possible. Therefore these values can

WARNING

- ⚠ The damping pads must be selected in such a way that the max. energy capacity per stroke is not exceeded (see performance table).
- ⚠ Only a limited extrapolation of customer-specific dimensions is possible due to the form factor. The selection of the material or pad dimension to be used should take place with practical tests, if necessary. The stroke should be max. 50 % of the respective material thickness.
- ⚠ With bulk materials a mathematical pad preselection is not possible. A preselection must take place with practical tests.
- ⚠ The damping pads can be permanently deformed by approx. 10 % of the material thickness (e.g. with continuous static loads).

- Temperatures under -20 °C and over +50 °C are to be avoided. Avoid stacking pallets, packages and rolls where possible. Only transport and store rolls in standing position.

Local regulations must be observed. Please dispose of the transportation packaging in an environmentally-friendly manner. Recycling packaging materials saves raw materials and reduces waste.

Maintenance and care

Regularly check the damping pads for damage and wear. Increased load duration results in reduced damping effect. If this is no longer sufficient, the damping pads must be replaced or exchanged as appropriate.

Disassembly and disposal

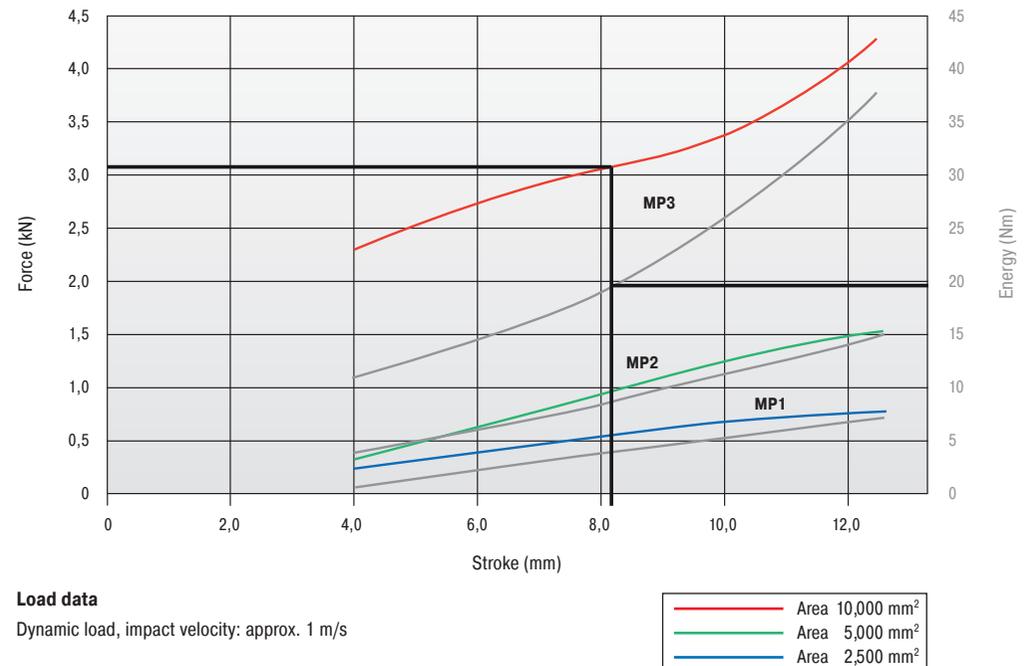
SLAB damping pads can either go to landfill or thermal utilisation.

Example: Pad selection according to energy and load characteristic curves

Type SL-030-25

Force stroke characteristic curve (dynamic)

Stroke utilisation 12.5 mm



Load data

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

Energy to be absorbed e.g. 20 Nm. This is to be determined in advance. Selected SL-030-25-D-MP3 damping pad. A stroke utilisation of approx. 8 mm with an expected reacting force of 3 kN can be found in the diagram.

Mounting instructions and mounting accessories

WARNING

-  A reduction of power consumption is to be expected with increased temperature.
-  During installation of the damping pads moving masses can lead to injuries due to inadvertent starting. Secure moving masses against inadvertent moving.
-  The damping pads may be unsuitable for use and have an insufficient damping effect. Before using the damping pads their use should be checked with field data, catalogue values and calculations. As there is often only a possibility of orientation towards these catalogue values, a final suitability should take place with a secured test run.
-  The damping effect of the damping pads can be reduced over time. Always lay out the connection structure in such a way that the occurring forces in this case can be absorbed with sufficient safety.
-  A failure of the product can lead to personal injuries and/or material damage. Use additional safety elements.
-  Mounting screw connections or bonds can work loose. Ensure suitable screw connections (safeguards). Note bonding recommendation and processing regulations!
-  Exceeding or falling below the maximum or minimum temperature can lead to the destruction of the damping pads and the damping pads could lose their function. Maintain the operating temperature range of -5 °C to +50 °C.
-  Oils, grease, acids and other influences in the environment can attack or damage the damping pads and cause a failure. Insulate the external materials in the area around the damping pads. Note the chemical resistance list (see catalogue). If necessary, use wear layer.
-  The damping pads may be unsuitable for application as a rebound effect can occur. Note that the energy is not completely absorbed. A limited application range is therefore to be observed for the following drive types: toothed belt drive, threaded spindle drive, drive with gears.
-  Impact velocity that is too high can lead to damage and failure. Note the max. impact velocity of 5 m/s.
-  Damping pads expand to the side under load. Sufficient room to the side is to be ensured during mounting.
-  Damage to the surface by other external influences can lead to an insufficient damping and to a premature failure of the damping pads. We recommend a regular check of the damping pads for wear and a check of the bonding, mounting elements etc. for correct fit.

Packaging disposal

Please dispose of the transportation packaging in an environmentally-friendly manner. Recycling packaging materials saves raw materials and reduces waste. The packaging materials do not contain any prohibited materials.

Installation instructions

Before installation and use check whether the identification number matches the respective designation on the delivery note.

Operating temperature range: -5 °C to +50 °C, higher temperatures temporarily possible.

Temperature effect: The W_3 values given in the performance table are valid for room temperature in the environment. At higher temperatures a reduction of this energy capacity is to be expected. There may also be temperature-related deviations from the target dimensions.

Mounting: in any position, however, always in such a way that the damping pads are evenly loaded across the entire surface. Exception: Bulk materials or similar applications. If necessary, use suitable wear layer.

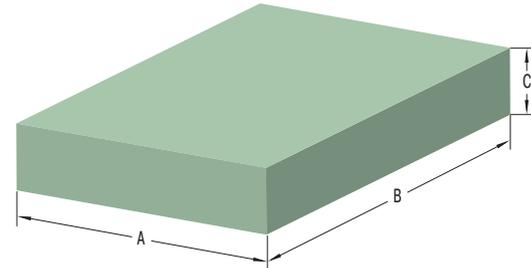
Damping pads expand to the side under load. Sufficient room to the side is to be ensured during mounting.

Stroke utilisation: max. 50 % of material thickness (short impact loads). With continuous loads max. 10 % of material thickness.

Mounting types: Bonding (see bonding recommendation attached), clamps, bolts etc.

SL-030-12

Sample pads MP1 to MP3



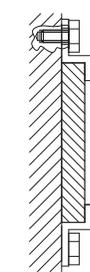
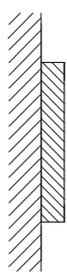
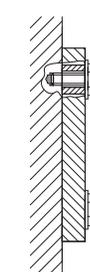
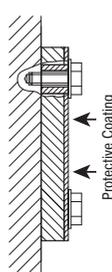
Performance data and dimensions

TYPES	¹ W_3 max. Nm/cycle	¹ Stroke mm	A mm	B mm	C mm	Area mm ²	Standard density kg/m ³	Return Time s	Weight kg
SL-030-12-D-MP1	3.1	6.5	50.0	50.0	12.5	2,500	170	4	0.006
SL-030-12-D-MP2	8.0	6.5	70.7	70.7	12.5	5,000	170	4	0.013
SL-030-12-D-MP3	19.0	6.5	100.0	100.0	12.5	10,000	170	4	0.025

¹ Maximum energy capacity by area graded pad sizes as orientation aid for the correct selection of material and pad size. The energy capacity is dependent upon the respective impact surface and stroke utilisation.

The pad dimensions shown here relate to the dimensions determined by ACE for determining the respective energy capacity and serve as an orientation aid for customer-specific customisations.

Mounting types

<p>Mounting with clamps</p>  <p>Observe respective tightening torque or use suitable thread locks. Slightly preload SLAB pad with clamping mount. Note: As it is not possible to load the entire surface, use a suitable protective layer, if necessary.</p>	<p>Mounting by bonding</p>  <p>Note "Bonding instructions" attached.</p>
<p>Mounting with bolts</p>  <p>Observe respective tightening torque! Slightly preload SLAB pad with spacer sleeve and washer. Note: As it is not possible to load the entire surface, use a suitable protective layer, if necessary.</p>	<p>Mounting with bolts with protective layer</p>  <p>Observe respective tightening torque! Slightly preload SLAB pad with spacer sleeve and washer. Use suitable protective layer.</p>

Mounting instructions and mounting accessories

WARNING

-  A reduction of power consumption is to be expected with increased temperature.
-  During installation of the damping pads moving masses can lead to injuries due to inadvertent starting. Secure moving masses against inadvertent moving.
-  The damping pads may be unsuitable for use and have an insufficient damping effect. Before using the damping pads their use should be checked with field data, catalogue values and calculations. As there is often only a possibility of orientation towards these catalogue values, a final suitability should take place with a secured test run.
-  The damping effect of the damping pads can be reduced over time. Always lay out the connection structure in such a way that the occurring forces in this case can be absorbed with sufficient safety.
-  A failure of the product can lead to personal injuries and/or material damage. Use additional safety elements.
-  Mounting screw connections or bonds can work loose. Ensure suitable screw connections (safeguards). Note bonding recommendation and processing regulations!
-  Exceeding or falling below the maximum or minimum temperature can lead to the destruction of the damping pads and the damping pads could lose their function. Maintain the operating temperature range of -5 °C to +50 °C.
-  Oils, grease, acids and other influences in the environment can attack or damage the damping pads and cause a failure. Insulate the external materials in the area around the damping pads. Note the chemical resistance list (see catalogue). If necessary, use wear layer.
-  The damping pads may be unsuitable for application as a rebound effect can occur. Note that the energy is not completely absorbed. A limited application range is therefore to be observed for the following drive types: toothed belt drive, threaded spindle drive, drive with gears.
-  Impact velocity that is too high can lead to damage and failure. Note the max. impact velocity of 5 m/s.
-  Damping pads expand to the side under load. Sufficient room to the side is to be ensured during mounting.
-  Damage to the surface by other external influences can lead to an insufficient damping and to a premature failure of the damping pads. We recommend a regular check of the damping pads for wear and a check of the bonding, mounting elements etc. for correct fit.

Packaging disposal

Please dispose of the transportation packaging in an environmentally-friendly manner. Recycling packaging materials saves raw materials and reduces waste. The packaging materials do not contain any prohibited materials.

Installation instructions

Before installation and use check whether the identification number matches the respective designation on the delivery note.

Operating temperature range: -5 °C to +50 °C, higher temperatures temporarily possible.

Temperature effect: The W_3 values given in the performance table are valid for room temperature in the environment. At higher temperatures a reduction of this energy capacity is to be expected. There may also be temperature-related deviations from the target dimensions.

Mounting: in any position, however, always in such a way that the damping pads are evenly loaded across the entire surface. Exception: Bulk materials or similar applications. If necessary, use suitable wear layer.

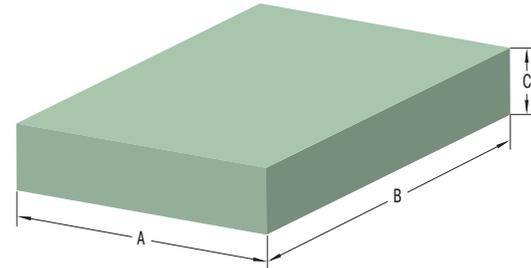
Damping pads expand to the side under load. Sufficient room to the side is to be ensured during mounting.

Stroke utilisation: max. 50 % of material thickness (short impact loads). With continuous loads max. 10 % of material thickness.

Mounting types: Bonding (see bonding recommendation attached), clamps, bolts etc.

SL-030-25

Sample pads MP1 to MP3



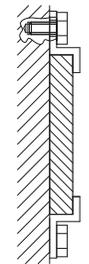
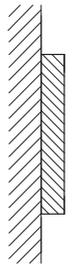
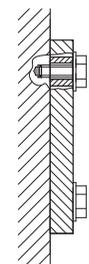
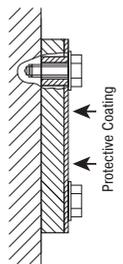
Performance data and dimensions

TYPES	¹ W_3 max. Nm/cycle	¹ Stroke mm	A mm	B mm	C mm	Area mm ²	Standard density kg/m ³	Return Time s	Weight kg
SL-030-25-D-MP1	6.7	12.5	50.0	50.0	25.0	2,500	170	5	0.013
SL-030-25-D-MP2	15.0	12.5	70.7	70.7	25.0	5,000	170	5	0.025
SL-030-25-D-MP3	42.0	12.5	100.0	100.0	25.0	10,000	170	5	0.050

¹ Maximum energy capacity by area graded pad sizes as orientation aid for the correct selection of material and pad size. The energy capacity is dependent upon the respective impact surface and stroke utilisation.

The pad dimensions shown here relate to the dimensions determined by ACE for determining the respective energy capacity and serve as an orientation aid for customer-specific customisations.

Mounting types

<p>Mounting with clamps</p>  <p>Observe respective tightening torque or use suitable thread locks. Slightly preload SLAB pad with clamping mount. Note: As it is not possible to load the entire surface, use a suitable protective layer, if necessary.</p>	<p>Mounting by bonding</p>  <p>Note "Bonding instructions" attached.</p>
<p>Mounting with bolts</p>  <p>Observe respective tightening torque! Slightly preload SLAB pad with spacer sleeve and washer. Note: As it is not possible to load the entire surface, use a suitable protective layer, if necessary.</p>	<p>Mounting with bolts with protective layer</p>  <p>Observe respective tightening torque! Slightly preload SLAB pad with spacer sleeve and washer. Use suitable protective layer.</p>

Mounting instructions and mounting accessories

WARNING

-  A reduction of power consumption is to be expected with increased temperature.
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-  A failure of the product can lead to personal injuries and/or material damage. Use additional safety elements.
-  Mounting screw connections or bonds can work loose. Ensure suitable screw connections (safeguards). Note bonding recommendation and processing regulations!
-  Exceeding or falling below the maximum or minimum temperature can lead to the destruction of the damping pads and the damping pads could lose their function. Maintain the operating temperature range of -5 °C to +50 °C.
-  Oils, grease, acids and other influences in the environment can attack or damage the damping pads and cause a failure. Insulate the external materials in the area around the damping pads. Note the chemical resistance list (see catalogue). If necessary, use wear layer.
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Packaging disposal

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Installation instructions

Before installation and use check whether the identification number matches the respective designation on the delivery note.

Operating temperature range: -5 °C to +50 °C, higher temperatures temporarily possible.

Temperature effect: The W_3 values given in the performance table are valid for room temperature in the environment. At higher temperatures a reduction of this energy capacity is to be expected. There may also be temperature-related deviations from the target dimensions.

Mounting: in any position, however, always in such a way that the damping pads are evenly loaded across the entire surface. Exception: Bulk materials or similar applications. If necessary, use suitable wear layer.

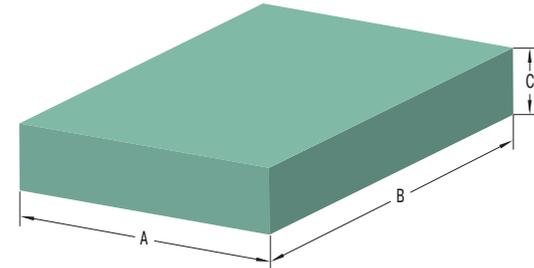
Damping pads expand to the side under load. Sufficient room to the side is to be ensured during mounting.

Stroke utilisation: max. 50 % of material thickness (short impact loads). With continuous loads max. 10 % of material thickness.

Mounting types: Bonding (see bonding recommendation attached), clamps, bolts etc.

SL-100-12

Sample pads MP1 to MP3



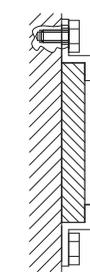
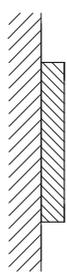
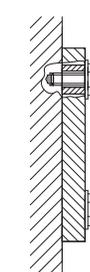
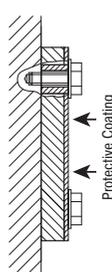
Performance data and dimensions

TYPES	¹ W_3 max. Nm/cycle	¹ Stroke mm	A mm	B mm	C mm	Area mm ²	Standard density kg/m ³	Return Time s	Weight kg
SL-100-12-D-MP1	15.0	6.5	50.0	50.0	12.5	2,500	340	4	0.014
SL-100-12-D-MP2	30.0	6.5	70.7	70.7	12.5	5,000	340	4	0.028
SL-100-12-D-MP3	60.0	6.5	100.0	100.0	12.5	10,000	340	4	0.055

¹ Maximum energy capacity by area graded pad sizes as orientation aid for the correct selection of material and pad size. The energy capacity is dependent upon the respective impact surface and stroke utilisation.

The pad dimensions shown here relate to the dimensions determined by ACE for determining the respective energy capacity and serve as an orientation aid for customer-specific customisations.

Mounting types

<p>Mounting with clamps</p>  <p>Observe respective tightening torque or use suitable thread locks. Slightly preload SLAB pad with clamping mount. Note: As it is not possible to load the entire surface, use a suitable protective layer, if necessary.</p>	<p>Mounting by bonding</p>  <p>Note "Bonding instructions" attached.</p>
<p>Mounting with bolts</p>  <p>Observe respective tightening torque! Slightly preload SLAB pad with spacer sleeve and washer. Note: As it is not possible to load the entire surface, use a suitable protective layer, if necessary.</p>	<p>Mounting with bolts with protective layer</p>  <p>Observe respective tightening torque! Slightly preload SLAB pad with spacer sleeve and washer. Use suitable protective layer.</p>

Mounting instructions and mounting accessories

WARNING

-  A reduction of power consumption is to be expected with increased temperature.
-  During installation of the damping pads moving masses can lead to injuries due to inadvertent starting. Secure moving masses against inadvertent moving.
-  The damping pads may be unsuitable for use and have an insufficient damping effect. Before using the damping pads their use should be checked with field data, catalogue values and calculations. As there is often only a possibility of orientation towards these catalogue values, a final suitability should take place with a secured test run.
-  The damping effect of the damping pads can be reduced over time. Always lay out the connection structure in such a way that the occurring forces in this case can be absorbed with sufficient safety.
-  A failure of the product can lead to personal injuries and/or material damage. Use additional safety elements.
-  Mounting screw connections or bonds can work loose. Ensure suitable screw connections (safeguards). Note bonding recommendation and processing regulations!
-  Exceeding or falling below the maximum or minimum temperature can lead to the destruction of the damping pads and the damping pads could lose their function. Maintain the operating temperature range of -5 °C to +50 °C.
-  Oils, grease, acids and other influences in the environment can attack or damage the damping pads and cause a failure. Insulate the external materials in the area around the damping pads. Note the chemical resistance list (see catalogue). If necessary, use wear layer.
-  The damping pads may be unsuitable for application as a rebound effect can occur. Note that the energy is not completely absorbed. A limited application range is therefore to be observed for the following drive types: toothed belt drive, threaded spindle drive, drive with gears.
-  Impact velocity that is too high can lead to damage and failure. Note the max. impact velocity of 5 m/s.
-  Damping pads expand to the side under load. Sufficient room to the side is to be ensured during mounting.
-  Damage to the surface by other external influences can lead to an insufficient damping and to a premature failure of the damping pads. We recommend a regular check of the damping pads for wear and a check of the bonding, mounting elements etc. for correct fit.

Packaging disposal

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Installation instructions

Before installation and use check whether the identification number matches the respective designation on the delivery note.

Operating temperature range: -5 °C to +50 °C, higher temperatures temporarily possible.

Temperature effect: The W_3 values given in the performance table are valid for room temperature in the environment. At higher temperatures a reduction of this energy capacity is to be expected. There may also be temperature-related deviations from the target dimensions.

Mounting: in any position, however, always in such a way that the damping pads are evenly loaded across the entire surface. Exception: Bulk materials or similar applications. If necessary, use suitable wear layer.

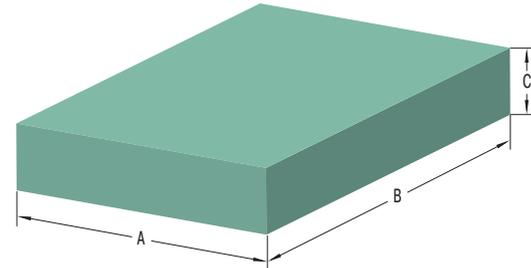
Damping pads expand to the side under load. Sufficient room to the side is to be ensured during mounting.

Stroke utilisation: max. 50 % of material thickness (short impact loads). With continuous loads max. 10 % of material thickness.

Mounting types: Bonding (see bonding recommendation attached), clamps, bolts etc.

SL-100-25

Sample pads MP1 to MP3



Performance data and dimensions

TYPES	¹ W_3 max. Nm/cycle	¹ Stroke mm	A mm	B mm	C mm	Area mm ²	Standard density kg/m ³	Return Time s	Weight kg
SL-100-25-D-MP1	20.0	12.5	50.0	50.0	25.0	2,500	340	5	0.028
SL-100-25-D-MP2	40.0	12.5	70.7	70.7	25.0	5,000	340	5	0.055
SL-100-25-D-MP3	63.0	12.5	100.0	100.0	25.0	10,000	340	5	0.110

¹ Maximum energy capacity by area graded pad sizes as orientation aid for the correct selection of material and pad size. The energy capacity is dependent upon the respective impact surface and stroke utilisation.

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Mounting types

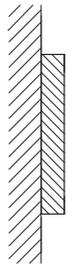
Mounting with clamps



Observe respective tightening torque or use suitable thread locks. Slightly preload SLAB pad with clamping mount.

Note: As it is not possible to load the entire surface, use a suitable protective layer, if necessary.

Mounting by bonding



Note "Bonding instructions" attached.

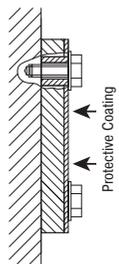
Mounting with bolts



Observe respective tightening torque! Slightly preload SLAB pad with spacer sleeve and washer.

Note: As it is not possible to load the entire surface, use a suitable protective layer, if necessary.

Mounting with bolts with protective layer



Observe respective tightening torque! Slightly preload SLAB pad with spacer sleeve and washer. Use suitable protective layer.

Mounting instructions and mounting accessories

WARNING

-  A reduction of power consumption is to be expected with increased temperature.
-  During installation of the damping pads moving masses can lead to injuries due to inadvertent starting. Secure moving masses against inadvertent moving.
-  The damping pads may be unsuitable for use and have an insufficient damping effect. Before using the damping pads their use should be checked with field data, catalogue values and calculations. As there is often only a possibility of orientation towards these catalogue values, a final suitability should take place with a secured test run.
-  The damping effect of the damping pads can be reduced over time. Always lay out the connection structure in such a way that the occurring forces in this case can be absorbed with sufficient safety.
-  A failure of the product can lead to personal injuries and/or material damage. Use additional safety elements.
-  Mounting screw connections or bonds can work loose. Ensure suitable screw connections (safeguards). Note bonding recommendation and processing regulations!
-  Exceeding or falling below the maximum or minimum temperature can lead to the destruction of the damping pads and the damping pads could lose their function. Maintain the operating temperature range of -5 °C to +50 °C.
-  Oils, grease, acids and other influences in the environment can attack or damage the damping pads and cause a failure. Insulate the external materials in the area around the damping pads. Note the chemical resistance list (see catalogue). If necessary, use wear layer.
-  The damping pads may be unsuitable for application as a rebound effect can occur. Note that the energy is not completely absorbed. A limited application range is therefore to be observed for the following drive types: toothed belt drive, threaded spindle drive, drive with gears.
-  Impact velocity that is too high can lead to damage and failure. Note the max. impact velocity of 5 m/s.
-  Damping pads expand to the side under load. Sufficient room to the side is to be ensured during mounting.
-  Damage to the surface by other external influences can lead to an insufficient damping and to a premature failure of the damping pads. We recommend a regular check of the damping pads for wear and a check of the bonding, mounting elements etc. for correct fit.

Packaging disposal

Please dispose of the transportation packaging in an environmentally-friendly manner. Recycling packaging materials saves raw materials and reduces waste. The packaging materials do not contain any prohibited materials.

Installation instructions

Before installation and use check whether the identification number matches the respective designation on the delivery note.

Operating temperature range: -5 °C to +50 °C, higher temperatures temporarily possible.

Temperature effect: The W_3 values given in the performance table are valid for room temperature in the environment. At higher temperatures a reduction of this energy capacity is to be expected. There may also be temperature-related deviations from the target dimensions.

Mounting: in any position, however, always in such a way that the damping pads are evenly loaded across the entire surface. Exception: Bulk materials or similar applications. If necessary, use suitable wear layer.

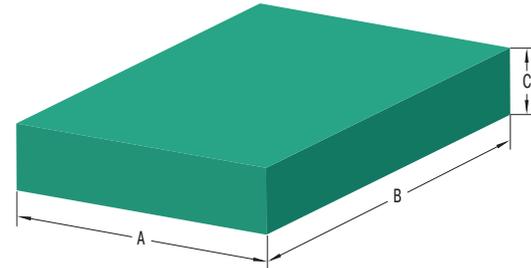
Damping pads expand to the side under load. Sufficient room to the side is to be ensured during mounting.

Stroke utilisation: max. 50 % of material thickness (short impact loads). With continuous loads max. 10 % of material thickness.

Mounting types: Bonding (see bonding recommendation attached), clamps, bolts etc.

SL-300-12

Sample pads MP1 to MP3



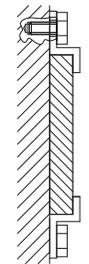
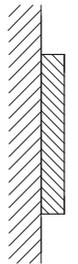
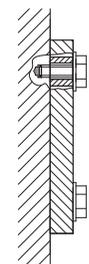
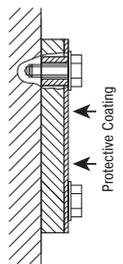
Performance data and dimensions

TYPES	¹ W_3 max. Nm/cycle	¹ Stroke mm	A mm	B mm	C mm	Area mm ²	Standard density kg/m ³	Return Time s	Weight kg
SL-300-12-D-MP1	38.0	6.5	50.0	50.0	12.5	2,500	480	3	0.021
SL-300-12-D-MP2	65.0	6.5	70.7	70.7	12.5	5,000	480	3	0.043
SL-300-12-D-MP3	121.0	6.5	100.0	100.0	12.5	10,000	480	3	0.085

¹ Maximum energy capacity by area graded pad sizes as orientation aid for the correct selection of material and pad size. The energy capacity is dependent upon the respective impact surface and stroke utilisation.

The pad dimensions shown here relate to the dimensions determined by ACE for determining the respective energy capacity and serve as an orientation aid for customer-specific customisations.

Mounting types

<p>Mounting with clamps</p>  <p>Observe respective tightening torque or use suitable thread locks. Slightly preload SLAB pad with clamping mount. Note: As it is not possible to load the entire surface, use a suitable protective layer, if necessary.</p>	<p>Mounting by bonding</p>  <p>Note "Bonding instructions" attached.</p>
<p>Mounting with bolts</p>  <p>Observe respective tightening torque! Slightly preload SLAB pad with spacer sleeve and washer. Note: As it is not possible to load the entire surface, use a suitable protective layer, if necessary.</p>	<p>Mounting with bolts with protective layer</p>  <p>Observe respective tightening torque! Slightly preload SLAB pad with spacer sleeve and washer. Use suitable protective layer.</p>

Mounting instructions and mounting accessories

WARNING

-  A reduction of power consumption is to be expected with increased temperature.
-  During installation of the damping pads moving masses can lead to injuries due to inadvertent starting. Secure moving masses against inadvertent moving.
-  The damping pads may be unsuitable for use and have an insufficient damping effect. Before using the damping pads their use should be checked with field data, catalogue values and calculations. As there is often only a possibility of orientation towards these catalogue values, a final suitability should take place with a secured test run.
-  The damping effect of the damping pads can be reduced over time. Always lay out the connection structure in such a way that the occurring forces in this case can be absorbed with sufficient safety.
-  A failure of the product can lead to personal injuries and/or material damage. Use additional safety elements.
-  Mounting screw connections or bonds can work loose. Ensure suitable screw connections (safeguards). Note bonding recommendation and processing regulations!
-  Exceeding or falling below the maximum or minimum temperature can lead to the destruction of the damping pads and the damping pads could lose their function. Maintain the operating temperature range of -5 °C to +50 °C.
-  Oils, grease, acids and other influences in the environment can attack or damage the damping pads and cause a failure. Insulate the external materials in the area around the damping pads. Note the chemical resistance list (see catalogue). If necessary, use wear layer.
-  The damping pads may be unsuitable for application as a rebound effect can occur. Note that the energy is not completely absorbed. A limited application range is therefore to be observed for the following drive types: toothed belt drive, threaded spindle drive, drive with gears.
-  Impact velocity that is too high can lead to damage and failure. Note the max. impact velocity of 5 m/s.
-  Damping pads expand to the side under load. Sufficient room to the side is to be ensured during mounting.
-  Damage to the surface by other external influences can lead to an insufficient damping and to a premature failure of the damping pads. We recommend a regular check of the damping pads for wear and a check of the bonding, mounting elements etc. for correct fit.

Packaging disposal

Please dispose of the transportation packaging in an environmentally-friendly manner. Recycling packaging materials saves raw materials and reduces waste. The packaging materials do not contain any prohibited materials.

Installation instructions

Before installation and use check whether the identification number matches the respective designation on the delivery note.

Operating temperature range: -5 °C to +50 °C, higher temperatures temporarily possible.

Temperature effect: The W_3 values given in the performance table are valid for room temperature in the environment. At higher temperatures a reduction of this energy capacity is to be expected. There may also be temperature-related deviations from the target dimensions.

Mounting: in any position, however, always in such a way that the damping pads are evenly loaded across the entire surface. Exception: Bulk materials or similar applications. If necessary, use suitable wear layer.

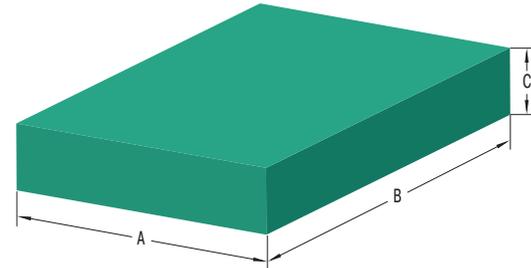
Damping pads expand to the side under load. Sufficient room to the side is to be ensured during mounting.

Stroke utilisation: max. 50 % of material thickness (short impact loads). With continuous loads max. 10 % of material thickness.

Mounting types: Bonding (see bonding recommendation attached), clamps, bolts etc.

SL-300-25

Sample pads MP1 to MP3



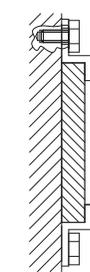
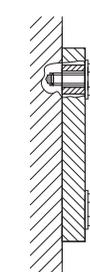
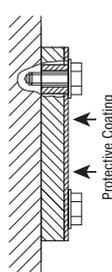
Performance data and dimensions

TYPES	¹ W_3 max. Nm/cycle	¹ Stroke mm	A mm	B mm	C mm	Area mm ²	Standard density kg/m ³	Return Time s	Weight kg
SL-300-25-D-MP1	59.0	12.5	50.0	50.0	25.0	2,500	480	4	0.043
SL-300-25-D-MP2	101.0	12.5	70.7	70.7	25.0	5,000	480	4	0.085
SL-300-25-D-MP3	210.0	12.5	100.0	100.0	25.0	10,000	480	4	0.170

¹ Maximum energy capacity by area graded pad sizes as orientation aid for the correct selection of material and pad size. The energy capacity is dependent upon the respective impact surface and stroke utilisation.

The pad dimensions shown here relate to the dimensions determined by ACE for determining the respective energy capacity and serve as an orientation aid for customer-specific customisations.

Mounting types

<p>Mounting with clamps</p>  <p>Observe respective tightening torque or use suitable thread locks. Slightly preload SLAB pad with clamping mount. Note: As it is not possible to load the entire surface, use a suitable protective layer, if necessary.</p>	<p>Mounting by bonding</p>  <p>Note "Bonding instructions" attached.</p>
<p>Mounting with bolts</p>  <p>Observe respective tightening torque! Slightly preload SLAB pad with spacer sleeve and washer. Note: As it is not possible to load the entire surface, use a suitable protective layer, if necessary.</p>	<p>Mounting with bolts with protective layer</p>  <p>Observe respective tightening torque! Slightly preload SLAB pad with spacer sleeve and washer. Use suitable protective layer.</p>

Manual

Warranty

Fundamentally, all modifications to the product by third parties lead to exclusion from the warranty.

Obvious defects must be reported to the vendor in writing immediately after delivery, no later than one week, but in any case before processing or installation, otherwise the assertion of a warranty claim is excluded. A timely dispatch is sufficient to keep the term.

The vendor is to be given an opportunity to check on site. If the complaint is justified the vendor offers warranty by repair or replacement at its own discretion. If the rectification fails, the buyer may choose to demand reduction of payment or cancellation of the contract. If there is only a minor lack of conformity, particularly with only minor defects, the buyer nevertheless has a right of withdrawal.

If, after failed rectification, the buyer chooses to cancel the contract due to a defect of title or material defect, they are not entitled to additionally claim for damages.

If, after failed fulfilment, the buyer chooses compensation, the goods remain with the buyer, if this is reasonable. The compensation is limited to the difference between the purchase price and the value of the defective item. This does not apply if the vendor maliciously causes the breach of contract.

The quality of the goods is only considered as agreed upon with the product description of the vendor. Public statements, claims or advertising of the manufacturer do not represent an additional contractual specification of quality of the goods.

If the buyer receives defective mounting instructions, the buyer is only obligated to deliver defect-free mounting instructions and only if the defect to the mounting instructions prevents proper mounting.

The warranty period is two years and begins upon completion. Exchange and return of custom products are fundamentally excluded. The factory conditions of the manufacturing factory apply to parts not manufactured and processed by the vendor, which can be viewed by the orderer at the vendor at any time. Construction and installation parts are delivered according to the present standard of engineering.

Service life

The service life is dependent upon the respective use. The higher the stroke used, the shorter the service life. More precise values are not available.

Technical data

Impact velocity range: Max. 5 m/s

Energy capacity: 3.1 Nm/cycle to 210 Nm/cycle

Standard density:

SL-030-12 and SL-030-25 = approx. 170 kg/m³

SL-100-12 and SL-100-25 = approx. 340 kg/m³

SL-300-12 and SL-300-25 = approx. 480 kg/m³

Standard colours: Green

Dimensions:

Widths: up to 1,500 mm

Lengths: up to 5,000 mm

Thicknesses: 12.5 mm and 25 mm

Rebound elasticity: SL-030-12 and SL-030-25: 15 %

SL-100-12 and SL-100-25: 15 %

SL-300-12 and SL-300-25: 14 %

Continuous static load: SL-030-12 and SL-030-25: 0.012 N/mm²

SL-100-12 and SL-100-25: 0.05 N/mm²

SL-300-12 and SL-300-25: 0.15 N/mm²

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

Operating temperature range: -5 °C to +50 °C (higher temperatures temporarily possible)

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: Class E, normally flammable, according to EN 13501-1; test method: EN ISO 11925-2

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

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 bond 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, moulding layers, protective coating, finish, paint, sweat etc.

Mechanical support

Stripping, brushing, scraping, grinding, sandblasting.

Chemical support

Degreasing (washing off with grease remover), etching, priming (observe the chemical resistance on the following page).

In general, SLAB damping pads in sheet form can be bonded without pretreatment. Moulded 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

This is a 1- and 2-component reactive glue. 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/mm²

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.

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