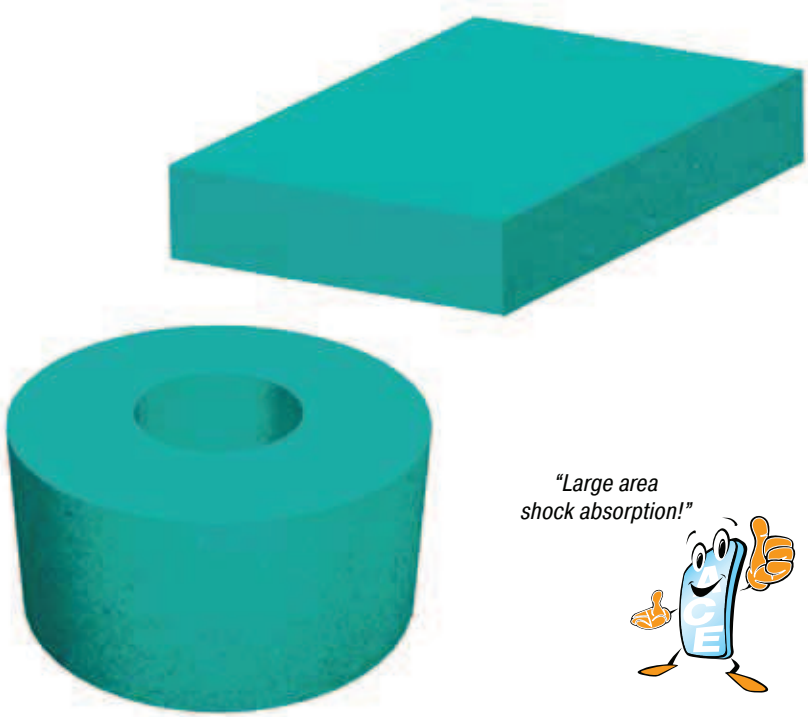
SLAB SL-030 to SL-300

Damping Plates for Shock Absorption

SLAB damping plates of the **SL-030, SL-100 and SL-300 series** are visco-elastic PUR materials that are manufactured according to a patented formula and which were especially designed to absorb shock loads. At the same time, the resulting structure-borne noise is effectively reduced. This material is characterized by its very high inner damping. The rebound elasticity is around < 30 % (Tolerance +/-10 %). The result makes this product an alternative to hydraulic end-of-travel damping, if the load doesn't need to be stopped accurately and the energy doesn't have to be reduced by 100 %.

The densities of
SL-030 = 270 kg/m³,
SL-100 = 500 kg/m³ and
SL-300 = 800 kg/m³
cover a wide spectrum of the energy absorption to the applied area. This enables a relatively independent choice of applied area.



"Large area shock absorption!"

Impact velocity range: max.5 m/s

Compression set: ⩽ 5 %, at 50 % of compression, 23 °C, 70 h, 30 min after unloading, according to EN ISO 1856

Environment: Resistant against ozone and UV radiation (also see chemical resistancy page 127)

Material: Mixed cellular PUR-Elastomer (polyether urethane), standard colour green

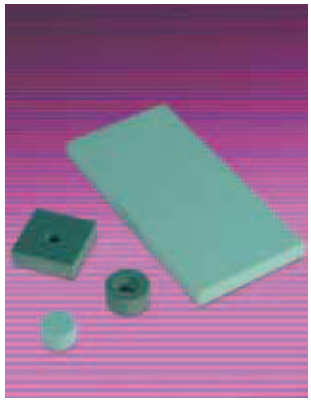
Standard density: 270 kg/m³, 500 kg/m³ and 800 kg/m³

Impact resilience: < 30 %, tolerance +/- 10 %, SL-030 and SL-100 according to DIN 53573, SL-300 according to DIN 53512 (measurement following the respective standard).

Fire rating: B2, normally flammable according to DIN 4102

Operating temperature range: -30 °C to +50 °C, short-term higher temperature possible.

Delivery form: Thickness: 12.5 mm and 25 mm. Rolls: 1.5 m wide, 5.0 m long. Strips: Up to the maximum width and length. Other dimensions (also thickness), colours, shapes and cut-out parts on request.



Possibilities for cutting: Water jet cutting, stamping, splitting, sawing, drilling etc.

Mounting style: Bonding (see adhesive recommendation page 126), clamps, screws, etc.

On request: Available with compact polyurethane wearing surface, shore hardness: 82 shore Sh A.

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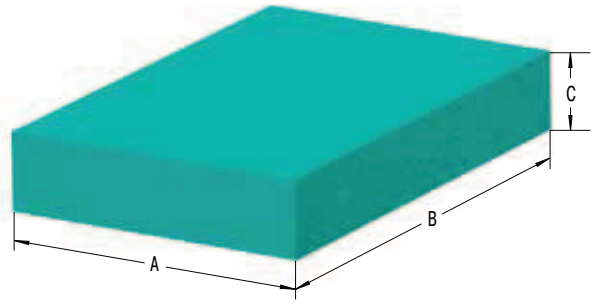
Issue 6.2011 Specifications subject to change

Ordering Example **SL-030-12-Dxxxx**

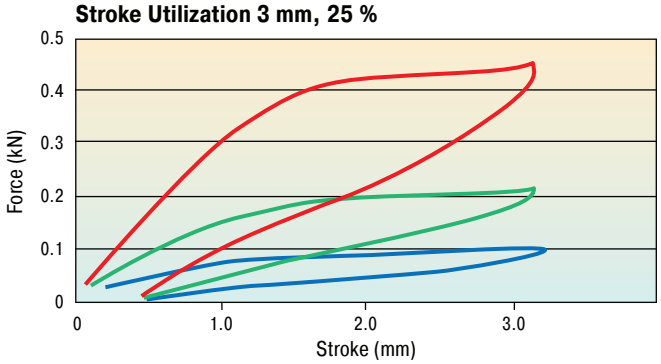
ACE-SLAB
Material Type
Material Thickness 12.5 mm
Customers Specific Dimension/Shape
(D-Number is assigned by ACE)



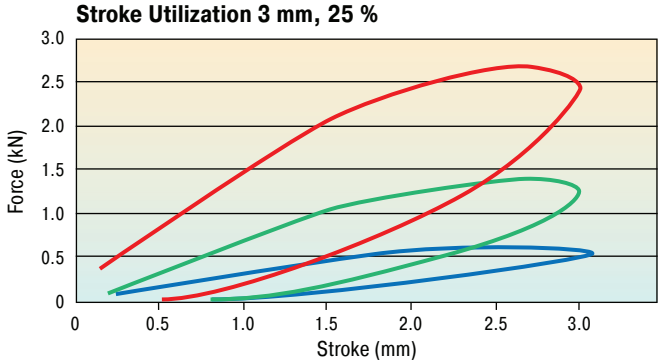
The chosen damping plate should be tested by the customer on the specific application.

Characteristics of Type SL-030-12

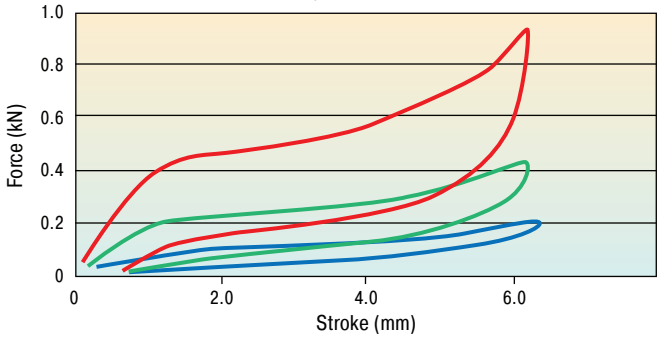
Force-Stroke Static
Stroke Utilization 3 mm, 25 %



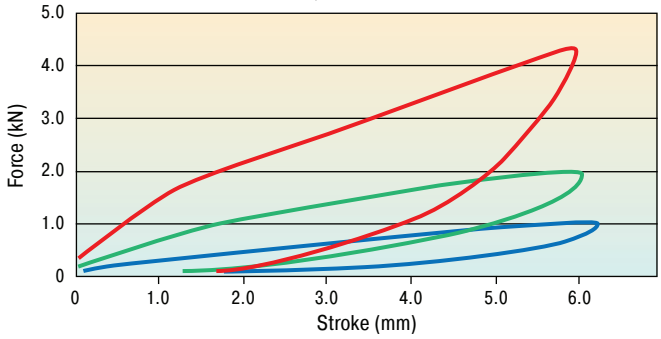
Force-Stroke Dynamic
Stroke Utilization 3 mm, 25 %



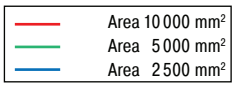
Force-Stroke Static
Stroke Utilization 6 mm, 50 %



Force-Stroke Dynamic
Stroke Utilization 6 mm, 50 %



Load data:
static, between two level plates
deformation velocity:
1 % of the plate thickness/sec.



Load data:
dynamic, free-falling mass,
impact velocity:
about 1 m/s.

Dimensions and Capacity Chart (Sample Plates MP1 to MP3)

Type	[1] W_3 max. Nm/Cycle	[1] Stroke Utilization mm	A	B	C	Area mm²	Density kg/m³	Return Time s	Weight kg
SL-030-12-D-MP1	2.3 (5.0)	3 (6)	50	50	12.5	2 500	270	Approx. 3 (4)	0.008
SL-030-12-D-MP2	4.3 (9.5)	3 (6)	70.7	70.7	12.5	5 000	270	Approx. 3 (4)	0.017
SL-030-12-D-MP3	9.5 (19.5)	3 (6)	100	100	12.5	10 000	270	Approx. 3 (4)	0.034

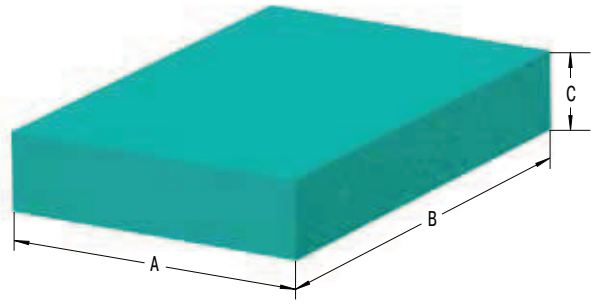
[1] Energy absorption and stroke utilization as well as the illustrated dynamic curve progression refer to a calculated free falling mass with an impact velocity of 1 m/s. For differing application data, these values can only be used as a reference. The energy absorption depends on the **individual impact surface** and stroke utilization. The longer the load duration the more the reduction in energy absorption (material fatigue).

SLAB SL-030-25

Damping Plates for Shock Absorption

Ordering Example **SL-030-25-Dxxxx**

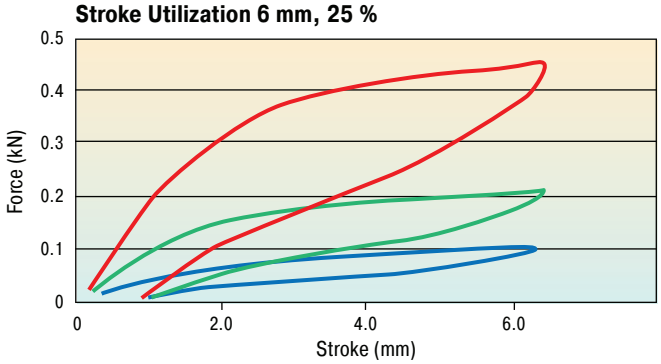
ACE-SLAB
Material Type
Material Thickness 25 mm
Customers Specific Dimension/Shape
(D-Number is assigned by ACE)



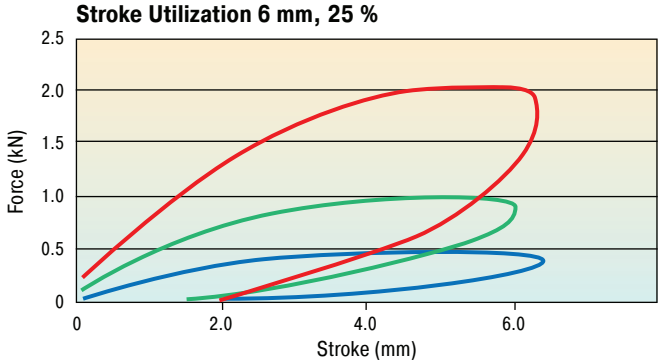
The chosen damping plate should be tested by the customer on the specific application.

Characteristics of Type SL-030-25

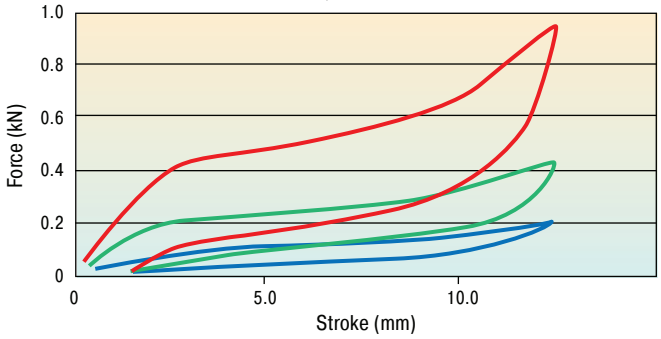
Force-Stroke Static
Stroke Utilization 6 mm, 25 %



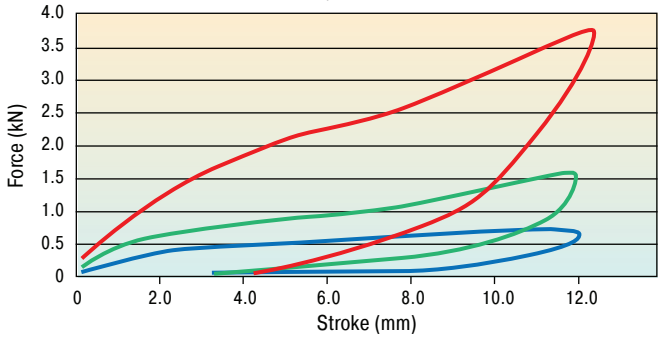
Force-Stroke Dynamic
Stroke Utilization 6 mm, 25 %



Force-Stroke Static
Stroke Utilization 12 mm, 50 %



Force-Stroke Dynamic
Stroke Utilization 12 mm, 50 %



Load data:
static, between two level plates
deformation velocity:
1 % of the plate thickness/sec.

Area 10 000 mm²
Area 5 000 mm²
Area 2 500 mm²

Load data:
dynamic, free-falling mass,
impact velocity:
about 1 m/s.

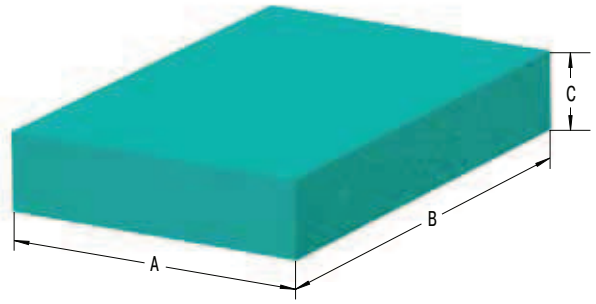
Dimensions and Capacity Chart (Sample Plates MP1 to MP3)

Type	[1] W_3 max. Nm/Cycle	[1] Stroke Utilization mm	A	B	C	Area mm²	Density kg/m³	Return Time s	Weight kg
SL-030-25-D-MP1	3.5 (6.0)	6 (12)	50	50	25	2 500	270	Approx. 4 (5)	0.017
SL-030-25-D-MP2	5.7 (11.5)	6 (12)	70.7	70.7	25	5 000	270	Approx. 4 (5)	0.034
SL-030-25-D-MP3	11.5 (21.5)	6 (12)	100	100	25	10 000	270	Approx. 4 (5)	0.068

[1] Energy absorption and stroke utilization as well as the illustrated dynamic curve progression refer to a calculated free falling mass with an impact velocity of 1 m/s. For differing application data, these values can only be used as a reference. The energy absorption depends on the **individual impact surface** and stroke utilization. The longer the load duration the more the reduction in energy absorption (material fatigue).

Ordering Example **SL-100-12-Dxxxx**

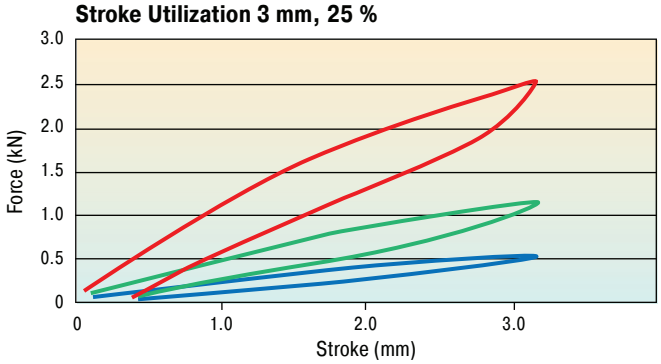
ACE-SLAB
Material Type
Material Thickness 12.5 mm
Customers Specific Dimension/Shape
(D-Number is assigned by ACE)



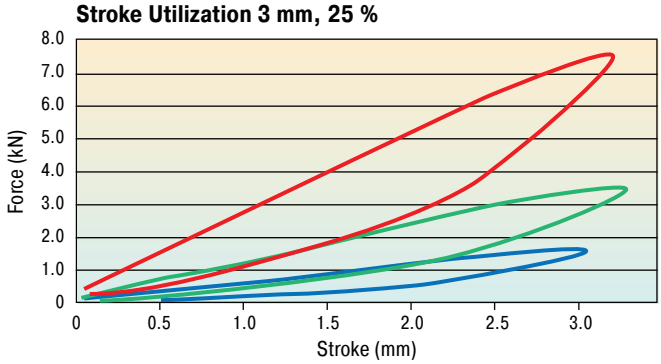
The chosen damping plate should be tested by the customer on the specific application.

Characteristics of Type SL-100-12

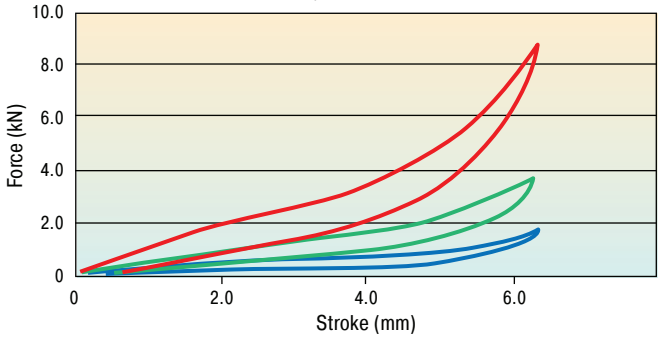
Force-Stroke Static
Stroke Utilization 3 mm, 25 %



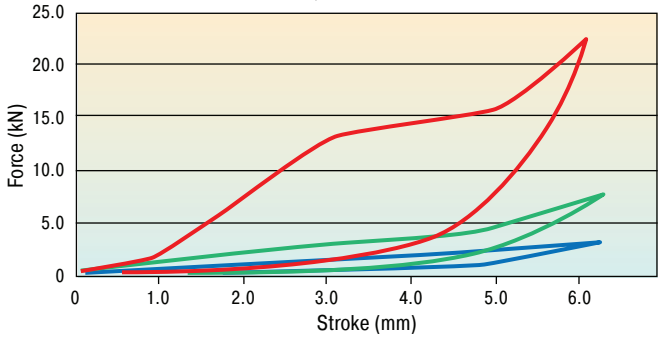
Force-Stroke Dynamic
Stroke Utilization 3 mm, 25 %



Force-Stroke Static
Stroke Utilization 6 mm, 50 %



Force-Stroke Dynamic
Stroke Utilization 6 mm, 50 %



Load data:
static, between two level plates
deformation velocity:
1 % of the plate thickness/sec.

Area 10 000 mm²
Area 5 000 mm²
Area 2 500 mm²

Load data:
dynamic, free-falling mass,
impact velocity:
about 1 m/s.

Dimensions and Capacity Chart (Sample Plates MP1 to MP3)

Type	[1] W_3 max. Nm/Cycle	[1] Stroke Utilization mm	A	B	C	Area mm²	Density kg/m³	Return Time s	Weight kg
SL-100-12-D-MP1	4.5 (13.0)	3 (6)	50	50	12.5	2 500	500	Approx. 3 (4)	0.016
SL-100-12-D-MP2	11.5 (29.0)	3 (6)	70.7	70.7	12.5	5 000	500	Approx. 3 (4)	0.031
SL-100-12-D-MP3	23.0 (75.0)	3 (6)	100	100	12.5	10 000	500	Approx. 3 (4)	0.063

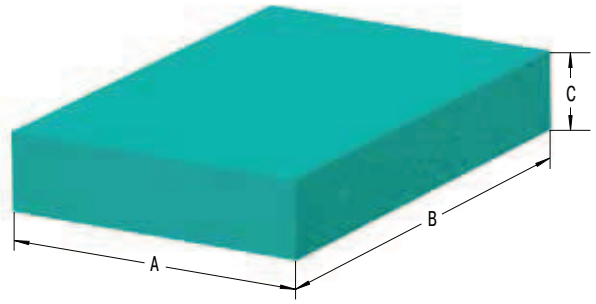
[1] Energy absorption and stroke utilization as well as the illustrated dynamic curve progression refer to a calculated free falling mass with an impact velocity of 1 m/s. For differing application data, these values can only be used as a reference. The energy absorption depends on the **individual impact surface** and stroke utilization. The longer the load duration the more the reduction in energy absorption (material fatigue).

SLAB SL-100-25

Damping Plates for Shock Absorption

Ordering Example **SL-100-25-Dxxxx**

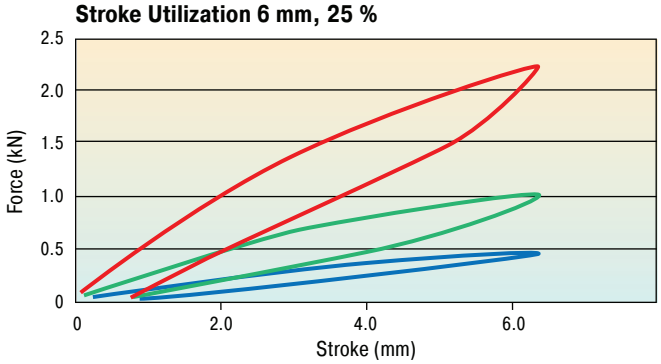
ACE-SLAB
Material Type
Material Thickness 25 mm
Customers Specific Dimension/Shape
(D-Number is assigned by ACE)



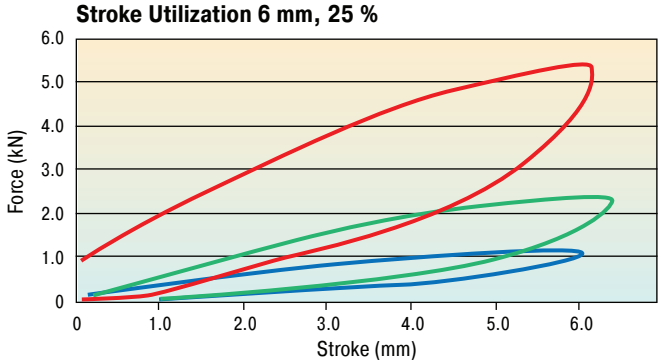
The chosen damping plate should be tested by the customer on the specific application.

Characteristics of Type SL-100-25

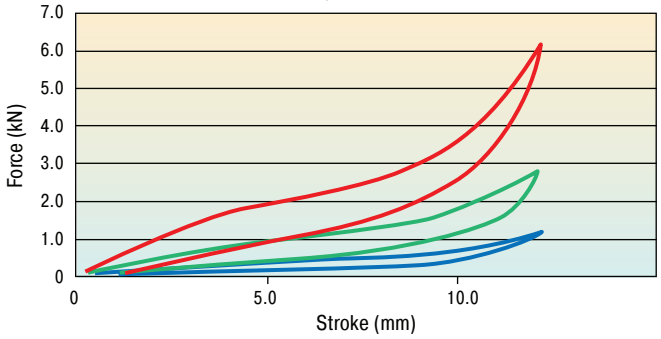
Force-Stroke Static
Stroke Utilization 6 mm, 25 %



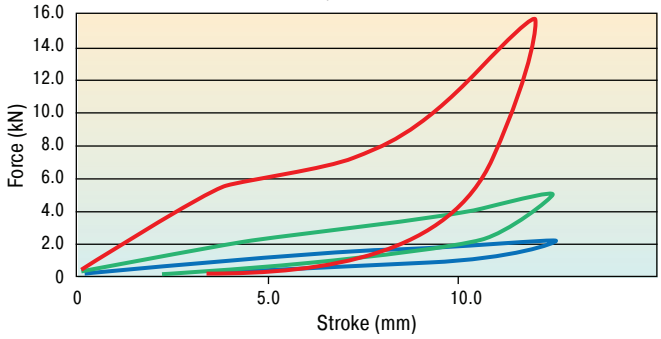
Force-Stroke Dynamic
Stroke Utilization 6 mm, 25 %



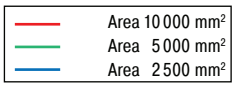
Force-Stroke Static
Stroke Utilization 12 mm, 50 %



Force-Stroke Dynamic
Stroke Utilization 12 mm, 50 %



Load data:
static, between two level plates
deformation velocity:
1 % of the plate thickness/sec.



Load data:
dynamic, free-falling mass,
impact velocity:
about 1 m/s.

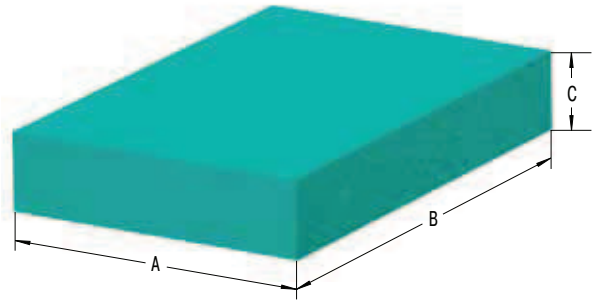
Dimensions and Capacity Chart (Sample Plates MP1 to MP3)

Type	[1] W_3 max. Nm/Cycle	[1] Stroke Utilization mm	A	B	C	Area mm²	Density kg/m³	Return Time s	Weight kg
SL-100-25-D-MP1	5.7 (14.5)	6 (12)	50	50	25	2 500	500	Approx. 4 (5)	0.031
SL-100-25-D-MP2	11.5 (33.0)	6 (12)	70.7	70.7	25	5 000	500	Approx. 4 (5)	0.062
SL-100-25-D-MP3	28.5 (90.0)	6 (12)	100	100	25	10 000	500	Approx. 4 (5)	0.125

[1] Energy absorption and stroke utilization as well as the illustrated dynamic curve progression refer to a calculated free falling mass with an impact velocity of 1 m/s. For differing application data, these values can only be used as a reference. The energy absorption depends on the **individual impact surface** and stroke utilization. The longer the load duration the more the reduction in energy absorption (material fatigue).

Ordering Example **SL-300-12-Dxxxx**

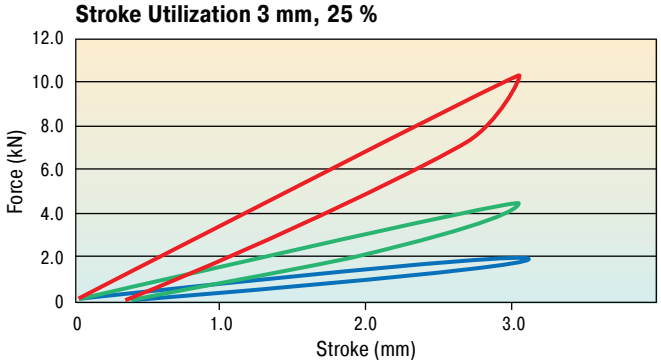
ACE-SLAB
Material Type
Material Thickness 12.5 mm
Customers Specific Dimension/Shape
(D-Number is assigned by ACE)



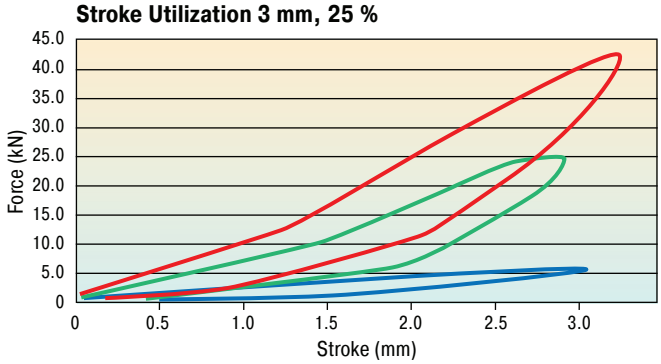
The chosen damping plate should be tested by the customer on the specific application.

Characteristics of Type SL-300-12

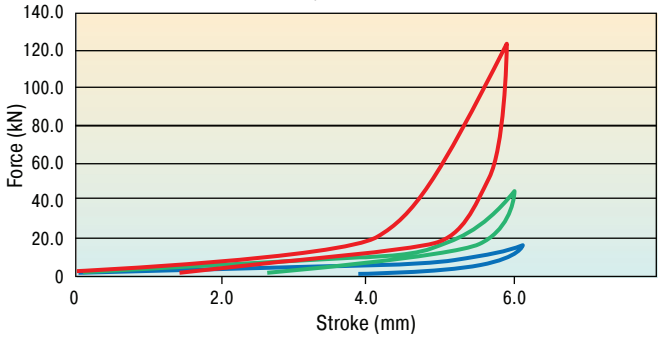
Force-Stroke Static
Stroke Utilization 3 mm, 25 %



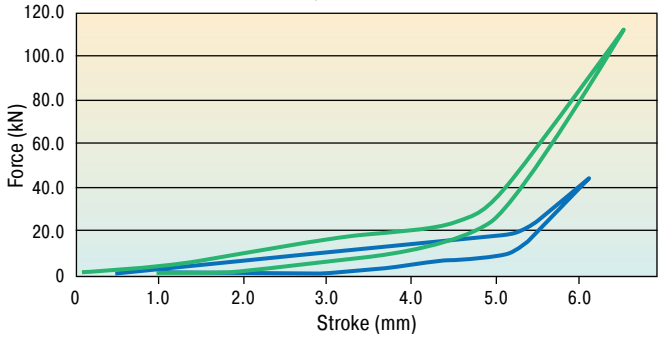
Force-Stroke Dynamic
Stroke Utilization 3 mm, 25 %



Force-Stroke Static
Stroke Utilization 6 mm, 50 %



Force-Stroke Dynamic
Stroke Utilization 6 mm, 50 %



Load data:
static, between two level plates
deformation velocity:
1 % of the plate thickness/sec.

Area 10 000 mm²
Area 5 000 mm²
Area 2 500 mm²

Load data:
dynamic, free-falling mass,
impact velocity:
about 1 m/s.

Dimensions and Capacity Chart (Sample Plates MP1 to MP3)

Type	[1] W_3 max. Nm/Cycle	[1] Stroke Utilization mm	A	B	C	Area mm²	Density kg/m³	Return Time s	Weight kg
SL-300-12-D-MP1	17.0 (85.0)	3 (6)	50	50	12.5	2 500	800	Approx. 2 (3)	0.025
SL-300-12-D-MP2	50.0 (250.0)	3 (6)	70.7	70.7	12.5	5 000	800	Approx. 2 (3)	0.050
SL-300-12-D-MP3	100.0	3 (6)	100	100	12.5	10 000	800	Approx. 2 (3)	0.100

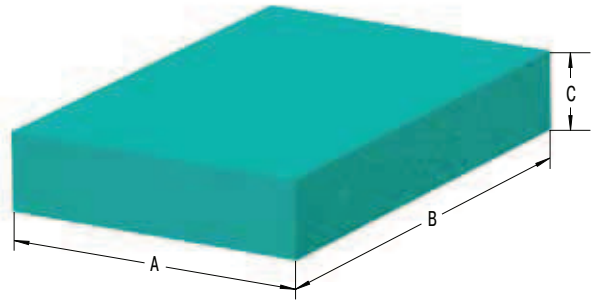
[1] Energy absorption and stroke utilization as well as the illustrated dynamic curve progression refer to a calculated free falling mass with an impact velocity of 1 m/s. For differing application data, these values can only be used as a reference. The energy absorption depends on the **individual impact surface** and stroke utilization. The longer the load duration the more the reduction in energy absorption (material fatigue).

SLAB SL-300-25

Damping Plates for Shock Absorption

Ordering Example **SL-300-25-Dxxxx**

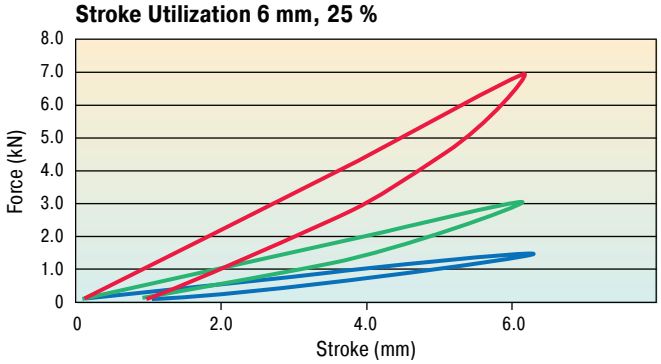
ACE-SLAB
Material Type
Material Thickness 25 mm
Customers Specific Dimension/Shape
(D-Number is assigned by ACE)



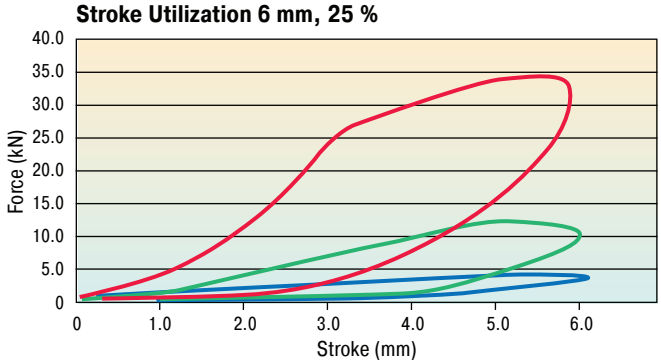
The chosen damping plate should be tested by the customer on the specific application.

Characteristics of Type SL-300-25

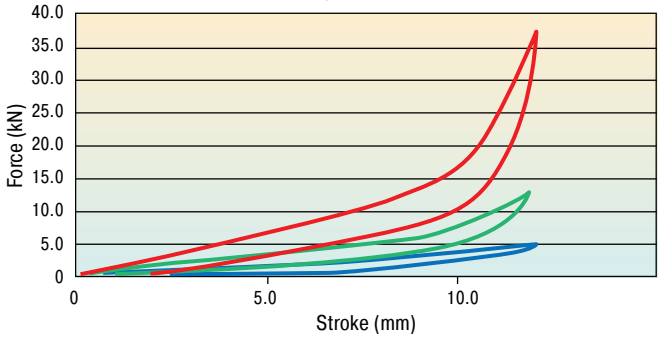
Force-Stroke Static
Stroke Utilization 6 mm, 25 %



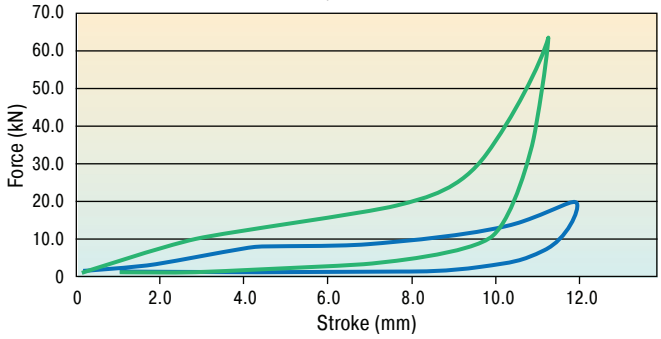
Force-Stroke Dynamic
Stroke Utilization 6 mm, 25 %



Force-Stroke Static
Stroke Utilization 12 mm, 50 %



Force-Stroke Dynamic
Stroke Utilization 12 mm, 50 %



Load data:
static, between two level plates
deformation velocity:
1 % of the plate thickness/sec.

Area 10 000 mm²
Area 5 000 mm²
Area 2 500 mm²

Load data:
dynamic, free-falling mass,
impact velocity:
about 1 m/s.

Dimensions and Capacity Chart (Sample Plates MP1 to MP3)

Type	[1] W_3 max. Nm/Cycle	[1] Stroke Utilization mm	A	B	C	Area mm²	Density kg/m³	Return Time s	Weight kg
SL-300-25-D-MP1	19.5 (90.0)	6 (12)	50	50	25	2500	800	Approx. 3 (4)	0.050
SL-300-25-D-MP2	50.0 (225.0)	6 (12)	70.7	70.7	25	5000	800	Approx. 3 (4)	0.100
SL-300-25-D-MP3	150.0	6 (12)	100	100	25	10000	800	Approx. 3 (4)	0.200

[1] Energy absorption and stroke utilization as well as the illustrated dynamic curve progression refer to a calculated free falling mass with an impact velocity of 1 m/s. For differing application data, these values can only be used as a reference. The energy absorption depends on the **individual impact surface** and stroke utilization. The longer the load duration the more the reduction in energy absorption (material fatigue).