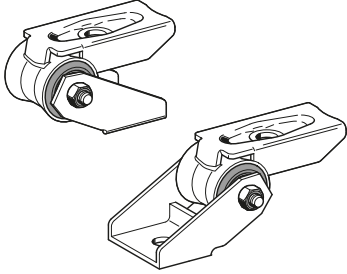
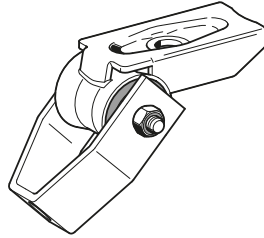


### Products

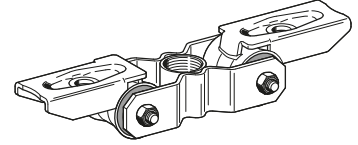
**Sound Absorber SDE 2 - SBV, SBZ**



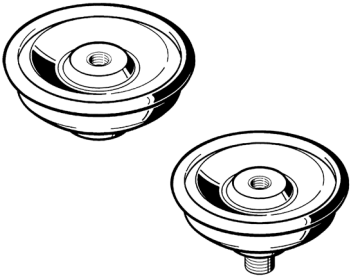
**Sound Absorber SDE 2 - UG 16**



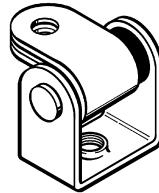
**Sound Absorber SDE 2 - FP 1**



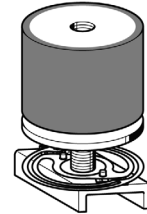
**Sound Absorber SDE 1 - M10, 3G**



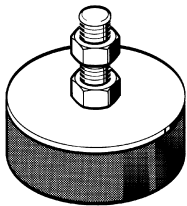
**Sound Absorber SDE 0 - M8, M10**



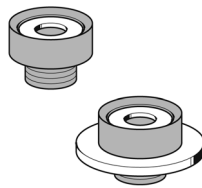
**Acoustic Absorption Element AKE 41**



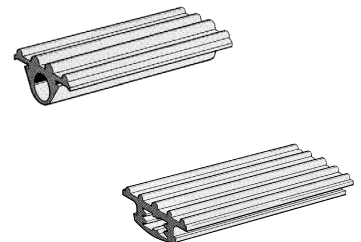
**Rubber-Metal-Combination-Element GMT**



**Sound Absorption Unit SDE 27, 41**



**Channel Lining SAL 27, 41**



**Rubber Profile SAL**



SBR/EPDM; Silicone

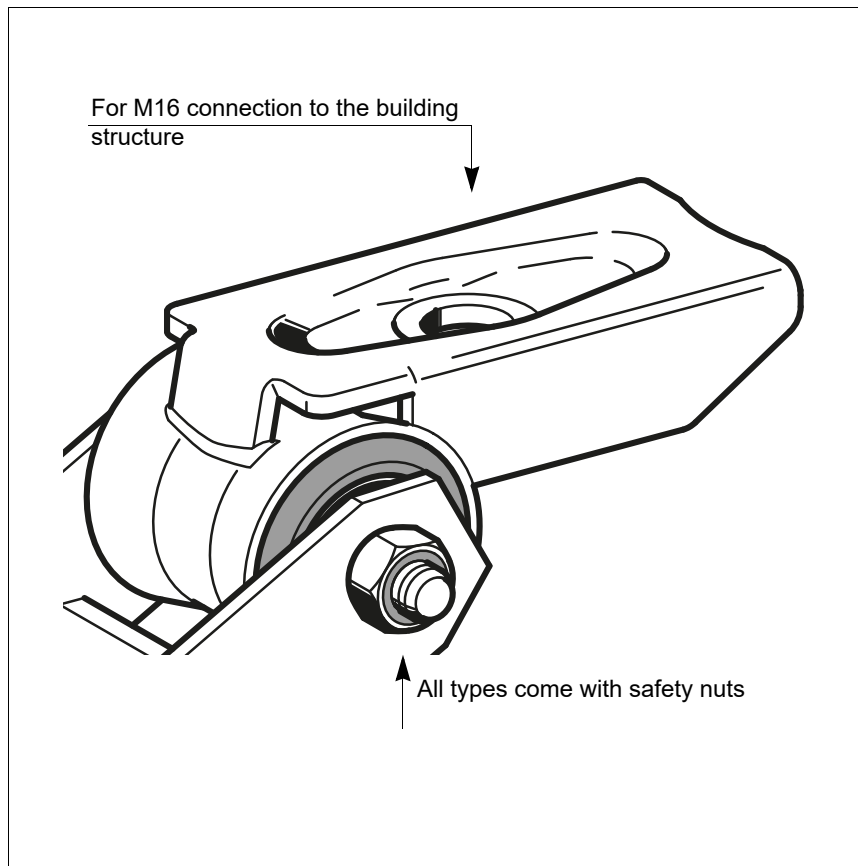
**Sponge Rubber Lining MSK**



**Glass Fibre Tape GSK**



### Sound Absorber SDE 2 (structure and overview)



According to the test certificate of the Fraunhofer Institute, the Sound Absorbers type SDE 2 guarantee sound absorption values of up to 15 dB(A), even under high loads.

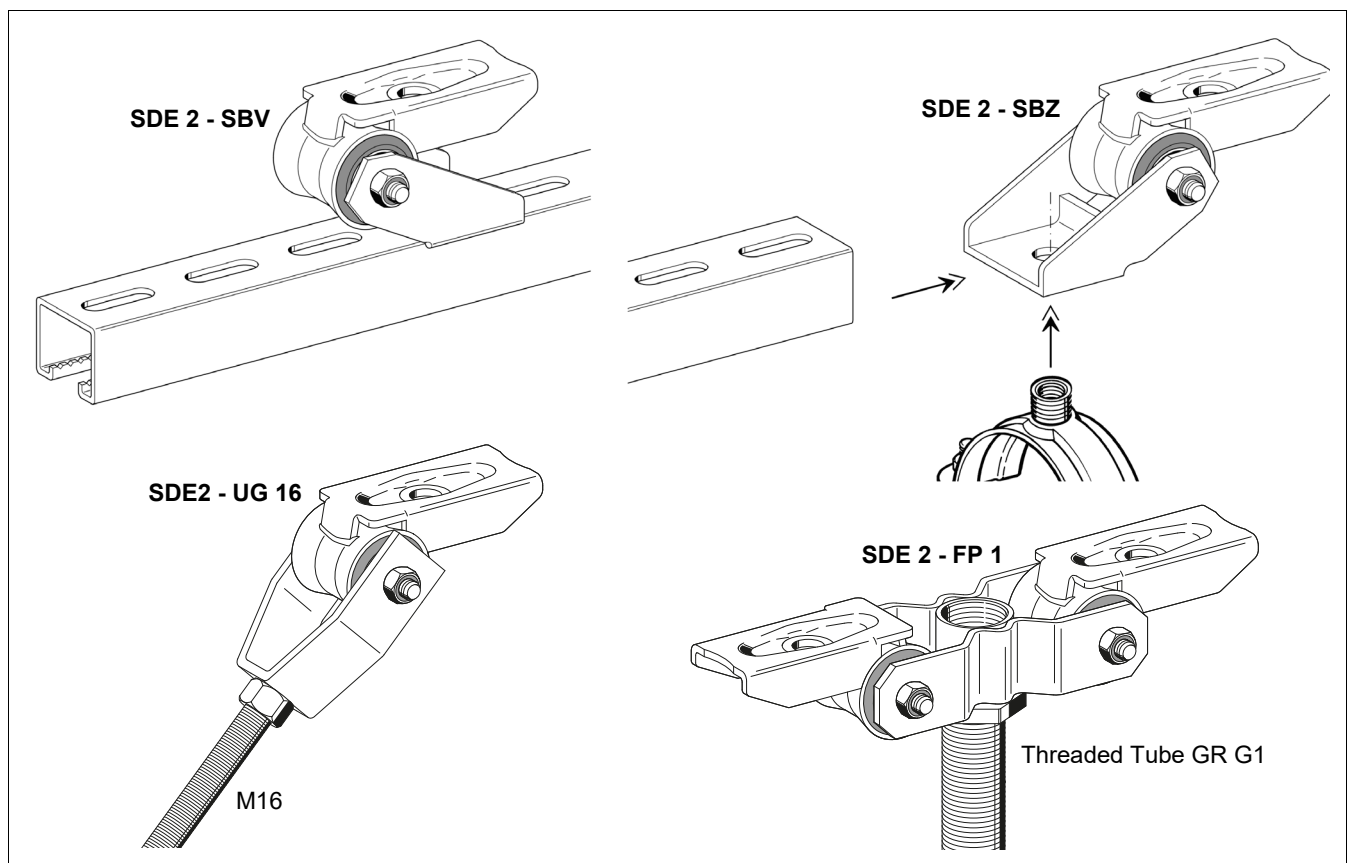
The symmetrical core, made of elastic foam PUR, is resistant up to 10kN in all directions of the rotation axis.

This same absorbing core is the basic material element of all SDE 2 types, and only differs by means of attachment to the connecting structure.

All types of the SDE 2 range can be fixed directly to the building structure or onto channels.

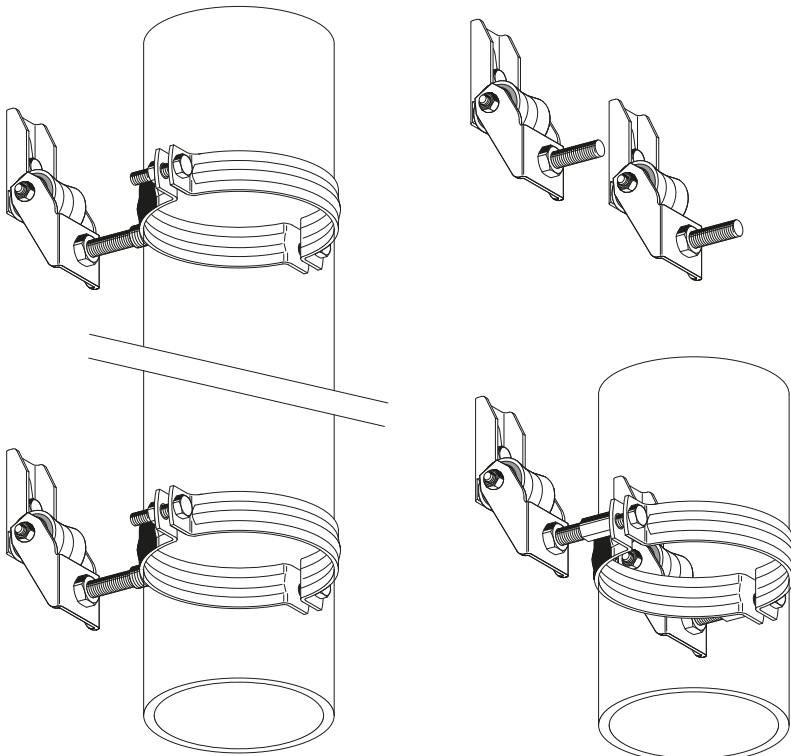
System-wise, connections can be made to:

- ◆ Channels MS
- ◆ Threaded Rod GST M16
- ◆ Threaded Tube GR G1 or
- ◆ Stabil D-3G Pipe Clamps



## Soundproof Fixing with SDE 2

### Vertical waste pipe



Examples for pipe installation according to soundproof requirement DIN 4109.

For every pipe section 2 pipe clamps are required.

Options:

- ◆ single point mounting
- ◆ two point mounting.

To realize small clearances between pipe and wall and for pipes from size 200 mm onwards, two point mounting is recommended.

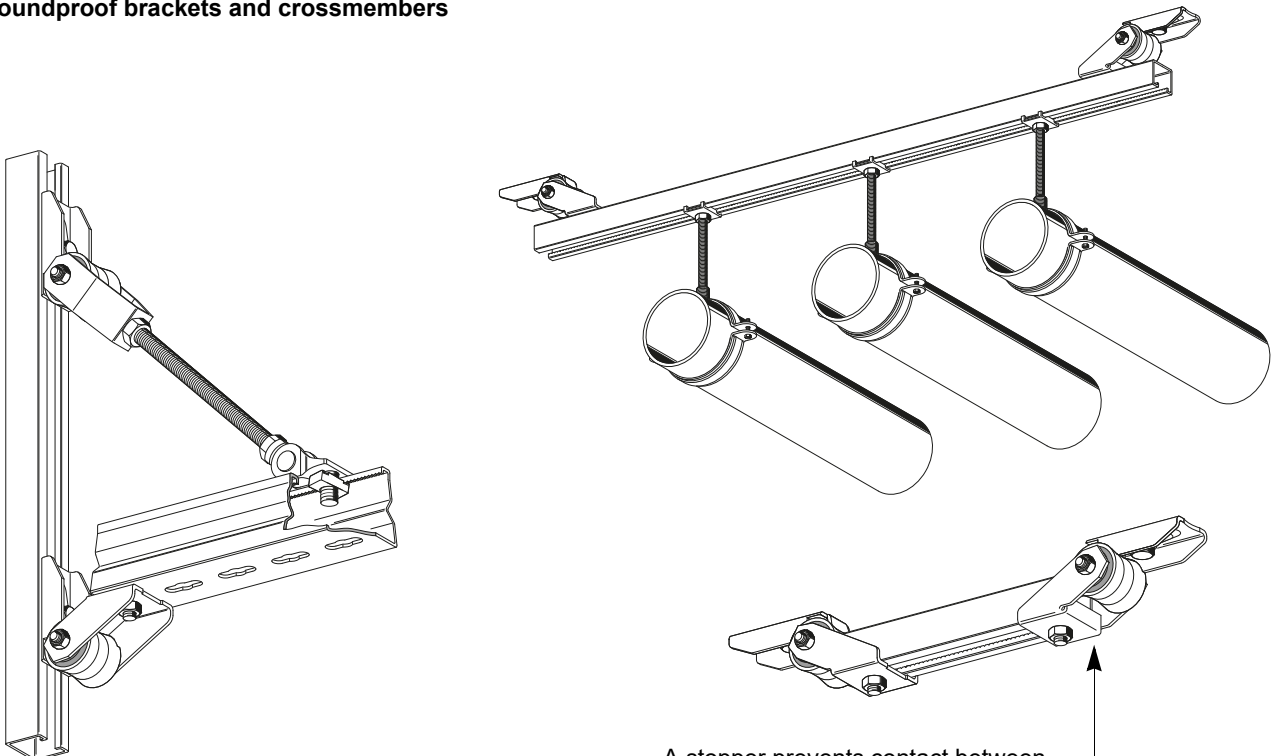
**Note:**

- ▶ Check the stability of the connections.

The combination of different types enables the soundproof fixing of various arrangements to crossmembers.

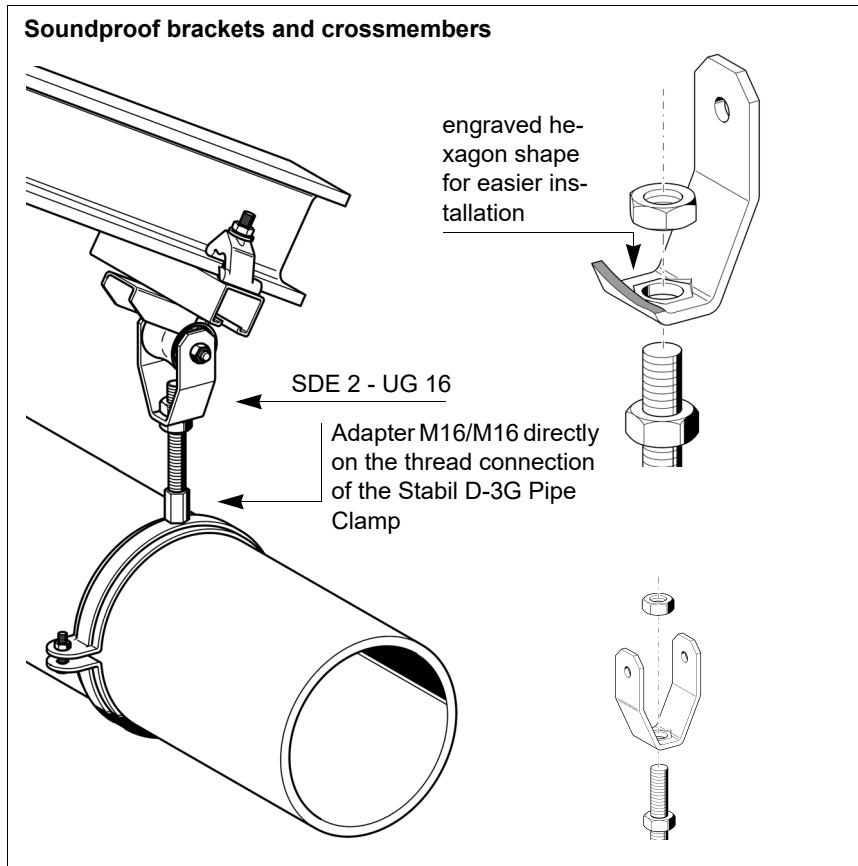


### Soundproof brackets and crossmembers



A stopper prevents contact between Channel and Sound Absorber.

### Diagonal connections and trestle arrangements



SDE 2 - UG 16:  
Universal Joint with Sound Absorber!

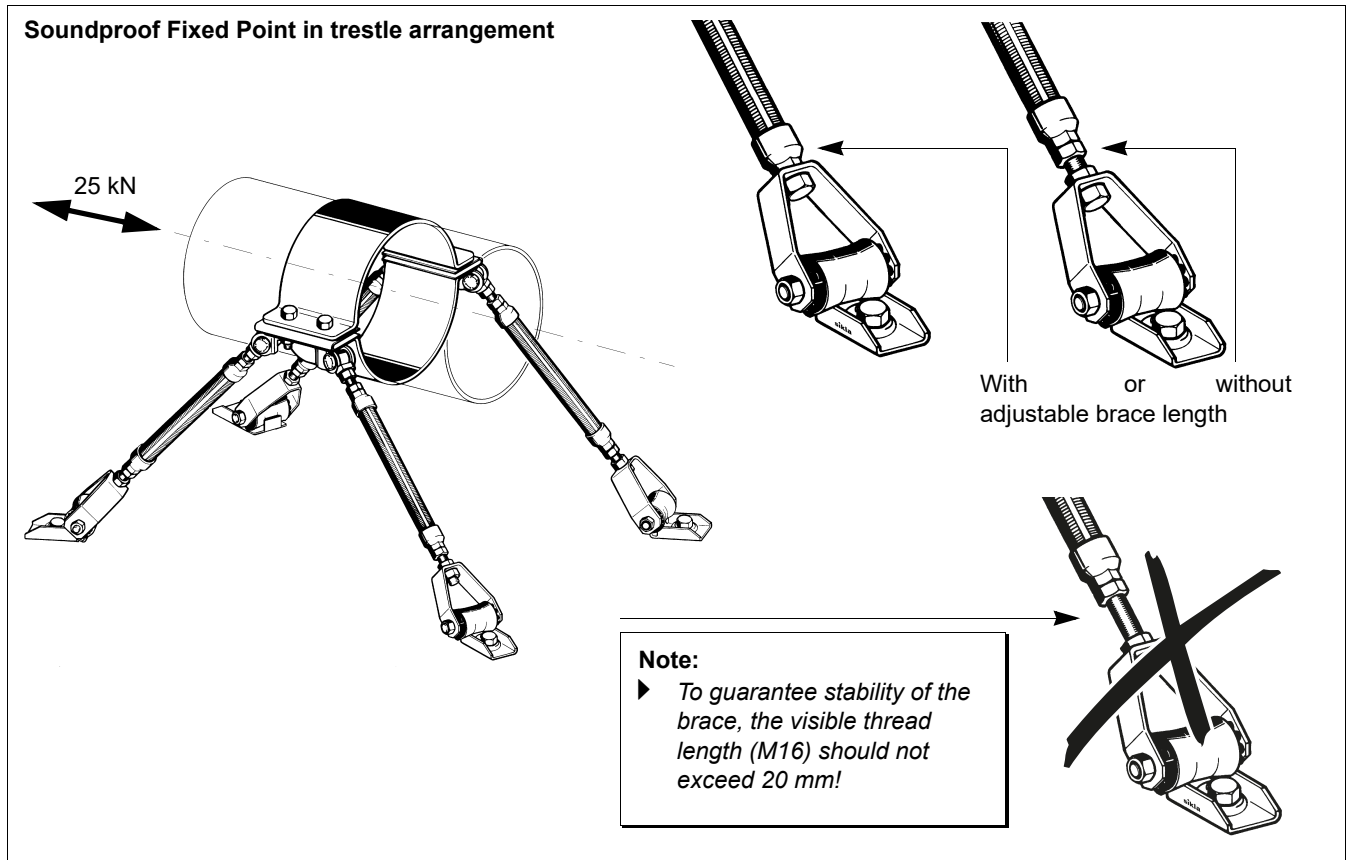
Particularly suitable for soundproof fixing to

- ◆ inclined ceilings
- ◆ inclined steel beams
- ◆ for pendulous suspension.

**Note:**

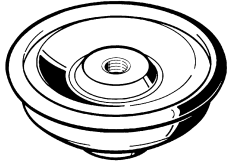
► Depending on the extent of vibration and potential of slip, connections to inclined beams must be additionally braced.

Soundproof Fixed Point in trestle arrangement, consisting of 4 SDE 2 UG 16 resilient up to 25 kN and caters for sound absorption up to 15 dB(A).



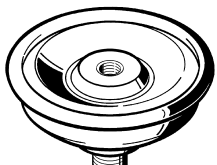
### Sound Absorber SDE 1

**Application, installation and types of SDE 1**




M10 connection to the building structure

SDE 1 - M10

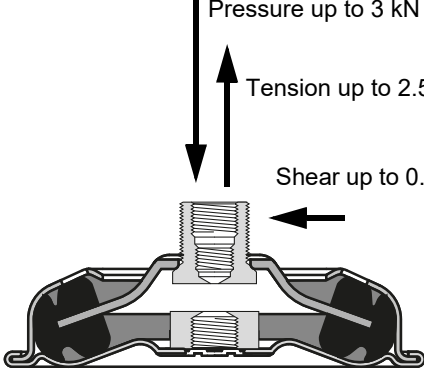


Threaded Stud M10x25 included in scope of supply

SDE 1 - 3G (M8, M10, M16)



Pin Spanner SDE serves as assembly tool



Pressure up to 3 kN

Tension up to 2.5 kN

Shear up to 0.5 kN

Caulked inside thread prevents unintentional bolting through

**SDE1:**

Sound absorption of up to 18.9 dB(A) on minimum space!

Particularly suitable for sound insulated fixing of

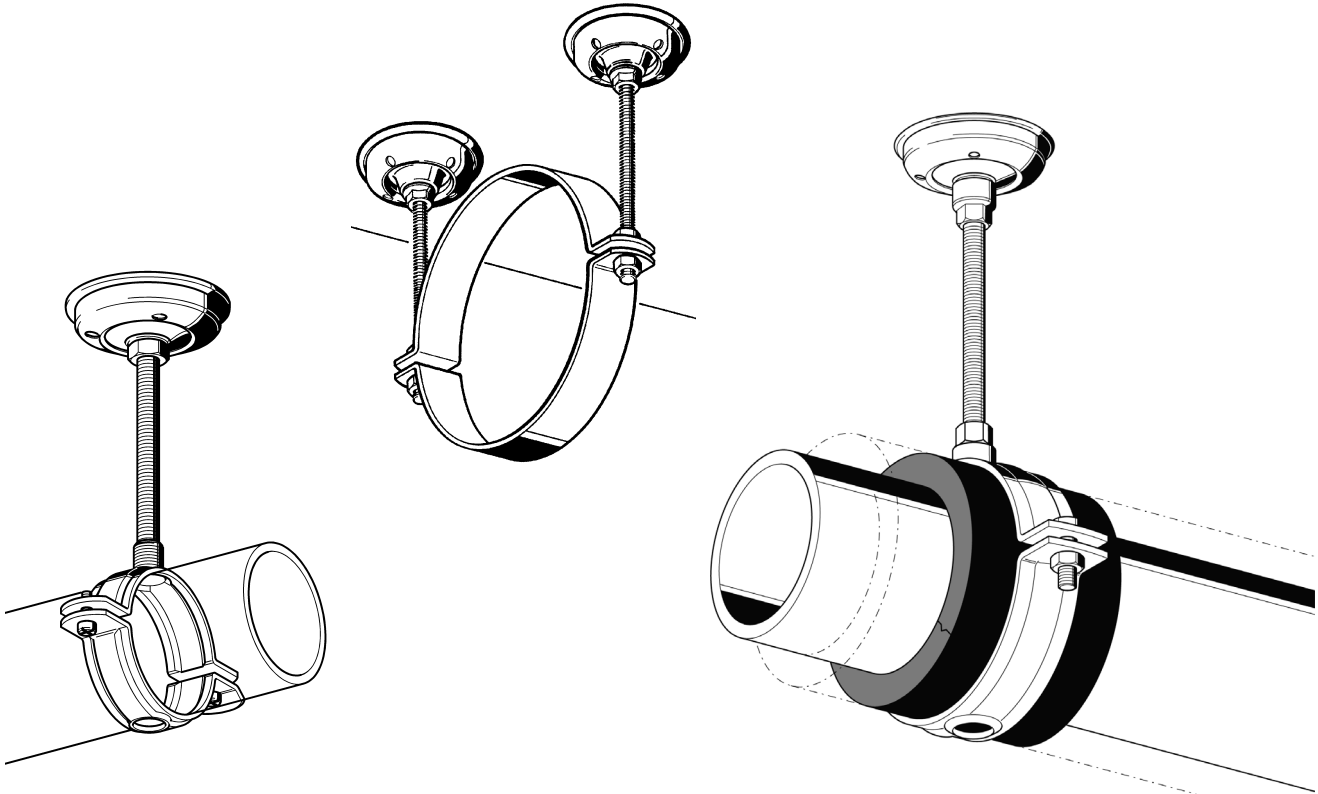
- ◆ pipe clamps
- ◆ crossmembers and
- ◆ brackets.

**Note:**

▶ *Threaded Studs can reduce extremely thrust capacity of construction, especially at greater lengths.*

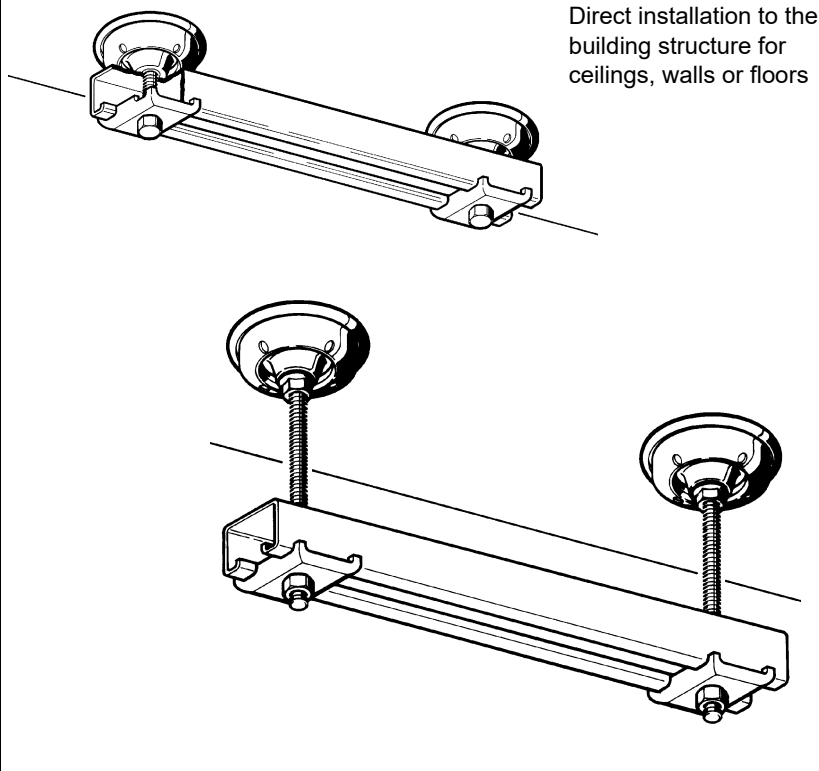
Using adapters, the SDE 1-3G enables connections through M16, Threaded Rods or Sikla Threaded Tubes up to G1.

**Alternative arrangements for pipe supports where the assemblies require sound protection to DIN 4109**



### Sound Absorption for Crossmembers and Brackets

#### Soundproof crossmembers on SDE 1



Soundproof crossmembers: Channels are directly fixed to the SDE 1 using Holding Brackets HK and Hexagon Bolts SKT.

**Note:**

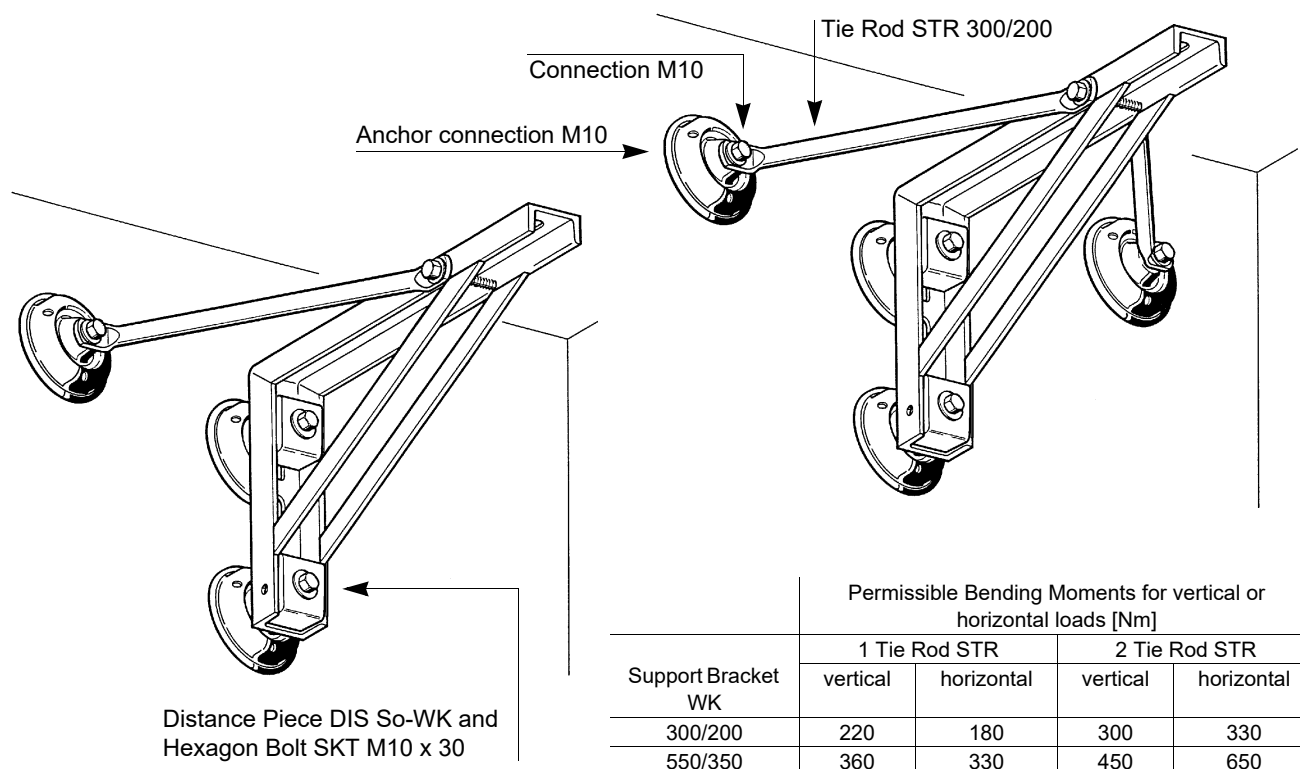
▶ *Suspended crossmembers are able to carry the weight of the pipes. When higher lateral forces appear, cantilevers must be used.*

**Caution:**

▶ *When fixing Support Brackets on SDE 1, at least one Tie Rod must be used.*

*Under load, the displacement of the bracket assembly has to be limited to a max. 3mm. Please consider bending moments which are listed in the table.*

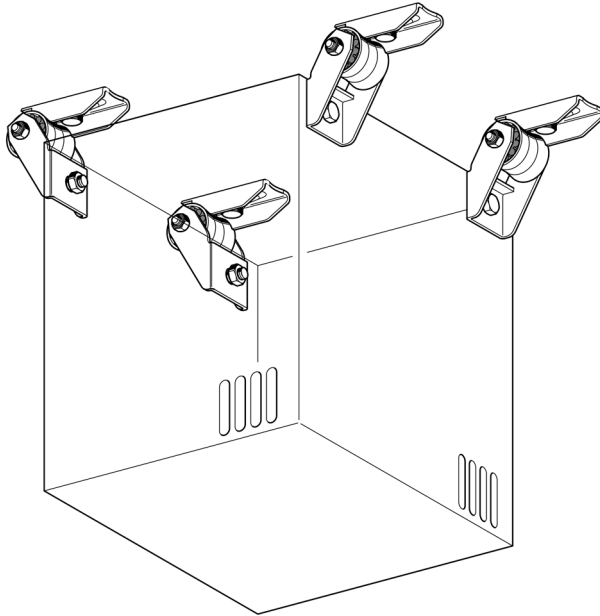
#### Soundproof Support Brackets with SDE 1 (Exemplified are sizes 300/200 and 550/350)



Support Bracket WK	Permissible Bending Moments for vertical or horizontal loads [Nm]			
	1 Tie Rod STR		2 Tie Rod STR	
	vertical	horizontal	vertical	horizontal
300/200	220	180	300	330
550/350	360	330	450	650

### Sound Absorption for Ducting Devices

#### Arrangements using Sound Absorbers SDE 2 Types SBZ and SBV



Types of sound absorber must be chosen according to the weight and installation situation.

Optimum combinations of sound absorber can enable better space-saving installation options.

#### Note:

► For correct installation of connecting parts to the SDE 1, the length of the M10 or M12 Hexagon Bolts SKT have to be determined carefully.

$$L_{max} = \text{height of connecting parts} + 10 \text{ mm}$$

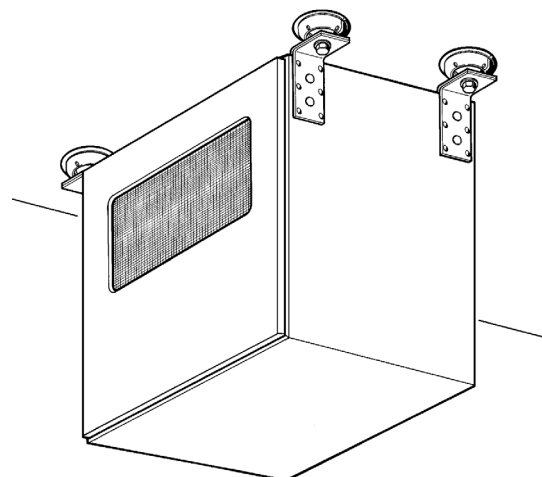
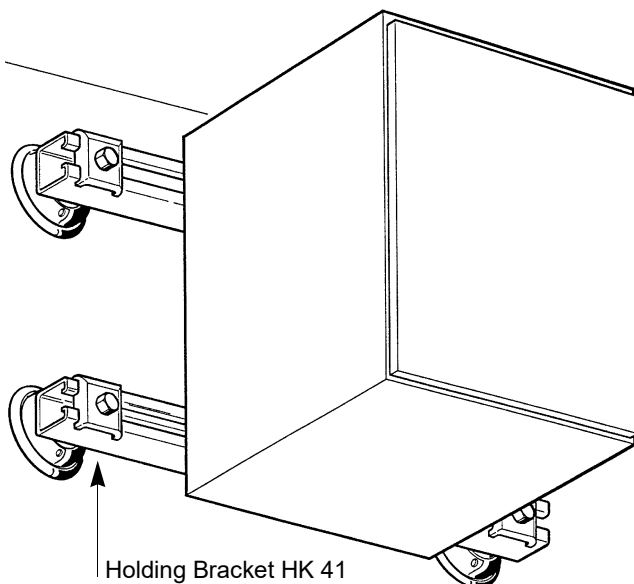
$$L_{min} = \text{height of connecting parts} + 7 \text{ mm}$$

The height can be adjusted using washers.



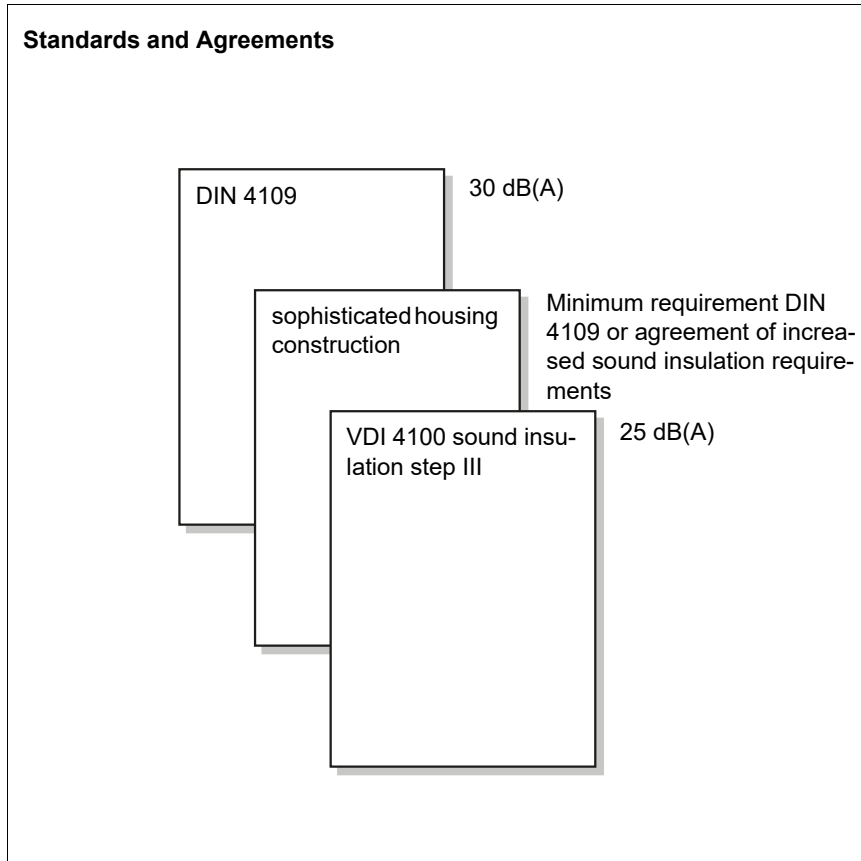
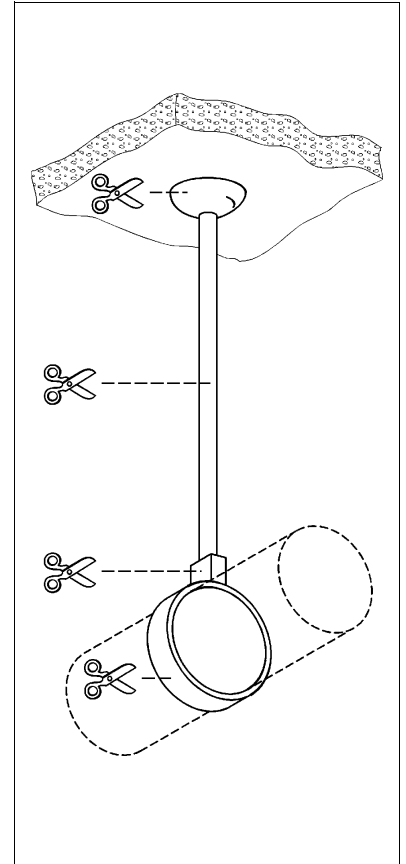
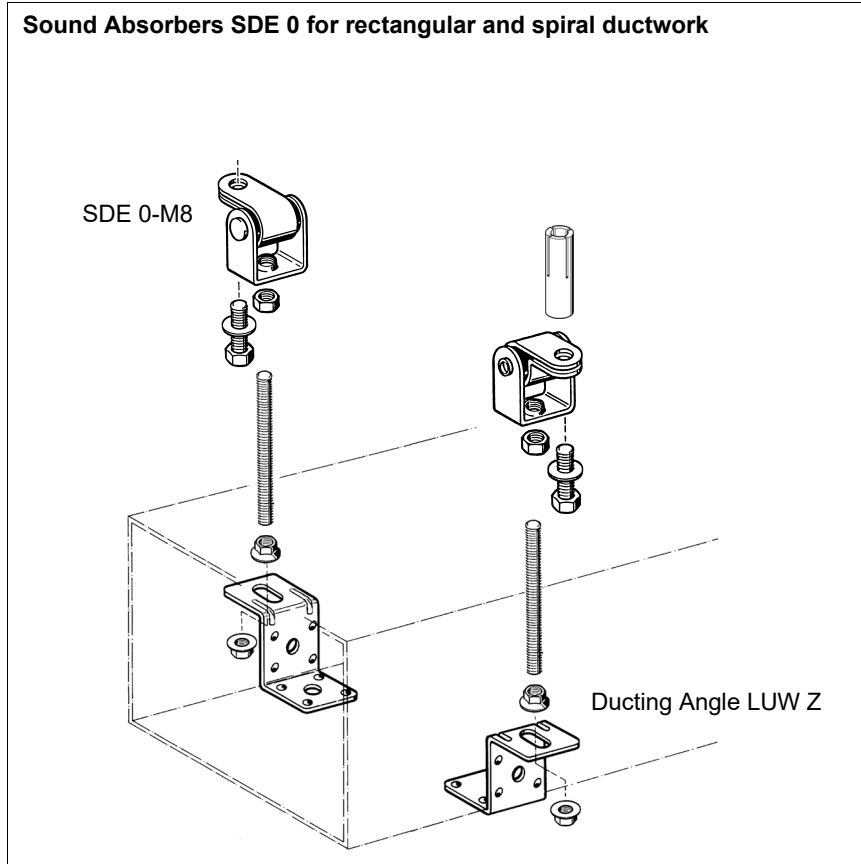
#### Sound Absorber SDE 1

Wall mounting on crossmembers, with the channels mounted either horizontally or vertically.



Direct ceiling or floor suspension using Ducting Angle L.

Application Examples and Standards



▲ Sound Absorbers can be fixed to every "interface" of construction. Though, values of insertion loss may not be simply added together !



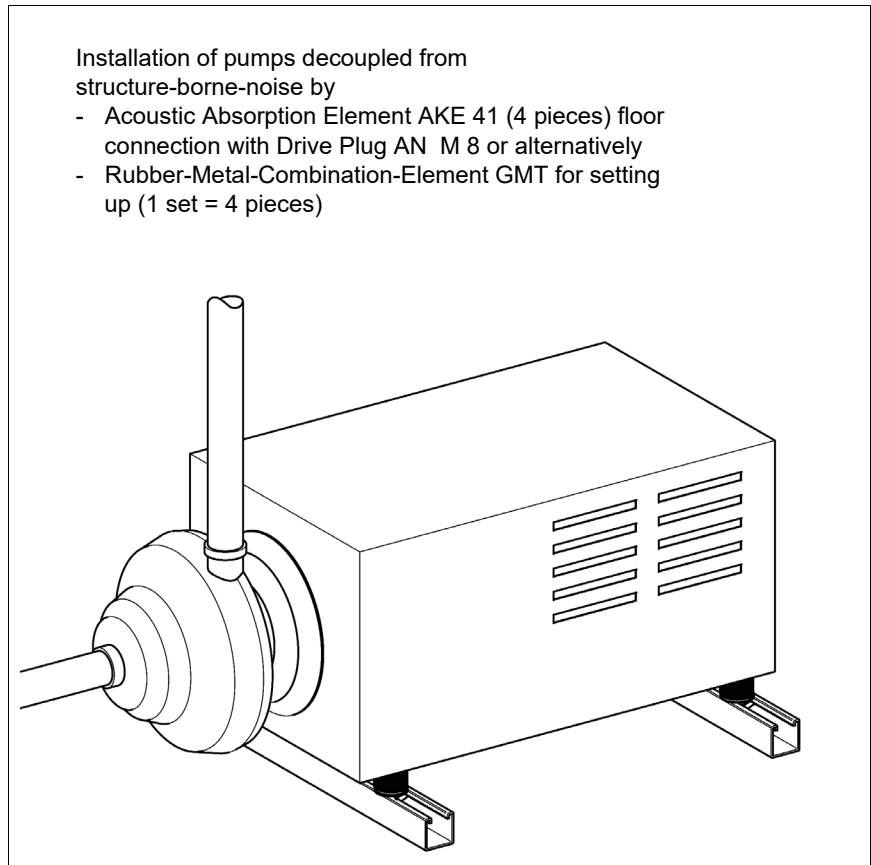
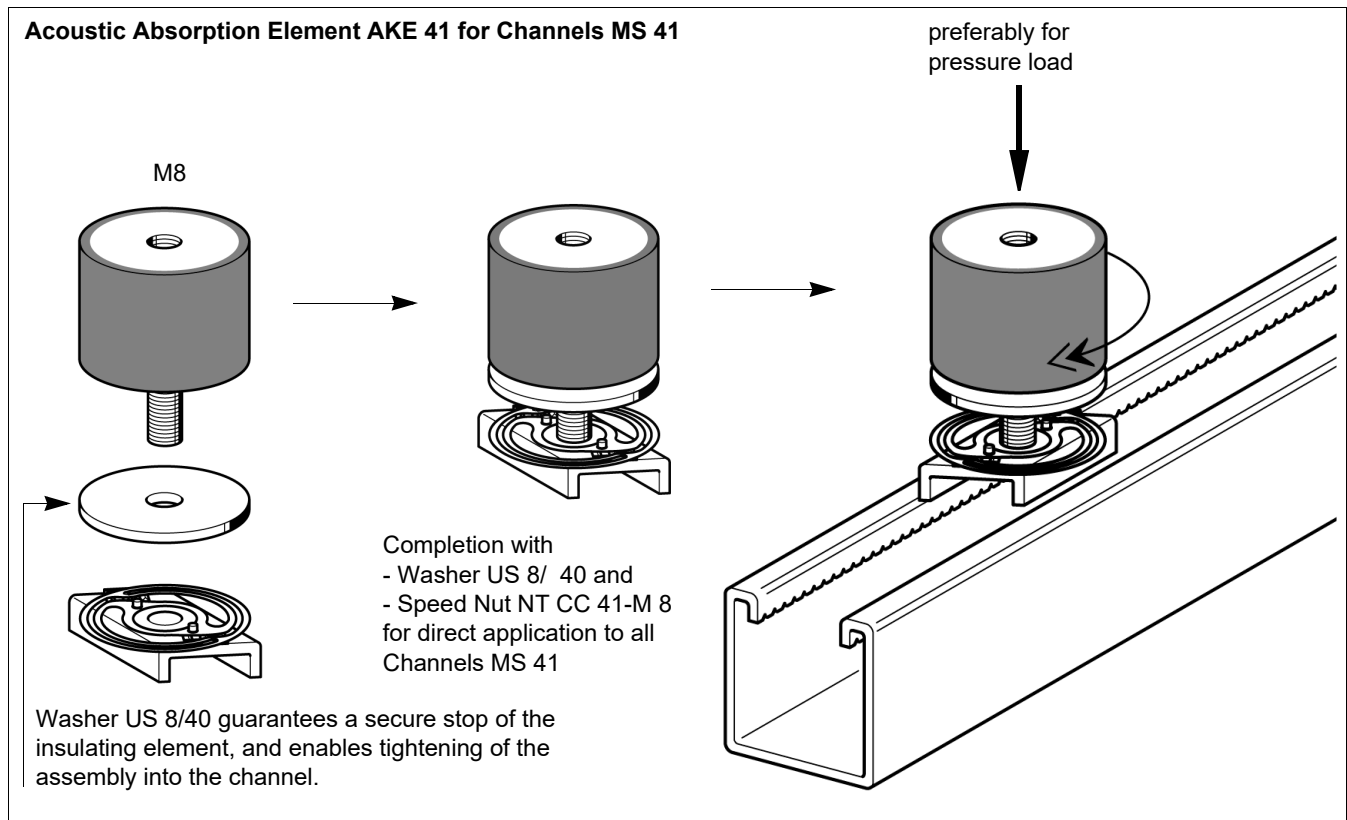
By the right application of sound absorbers, expensive recourse claims caused by reduced living comfort will be avoided.

The permitted remaining sound level is stated in standards and other tendering determinations.

**Note:**  
▶ Sound absorption measures also improve the durability of installations and equipment by reducing the effects of vibration.



### Acoustic Absorption Element AKE 41 and Rubber-Metal-Combination-Element GMT



Suitable for direct decoupling of devices like pumps, ventilators or channel constructions according to sound absorption certificate DIN 4109.

**Note!**

► Tensile and shear loads are typically not permitted when using the Acoustic Absorption Element AKE 41. For these exceptional cases where the element is subject to tensile and shear loads, reduced load ratings apply.

Sound Absorption Unit SDE for Channels MS, Rectangular Ducts on Channel Lining SAL

