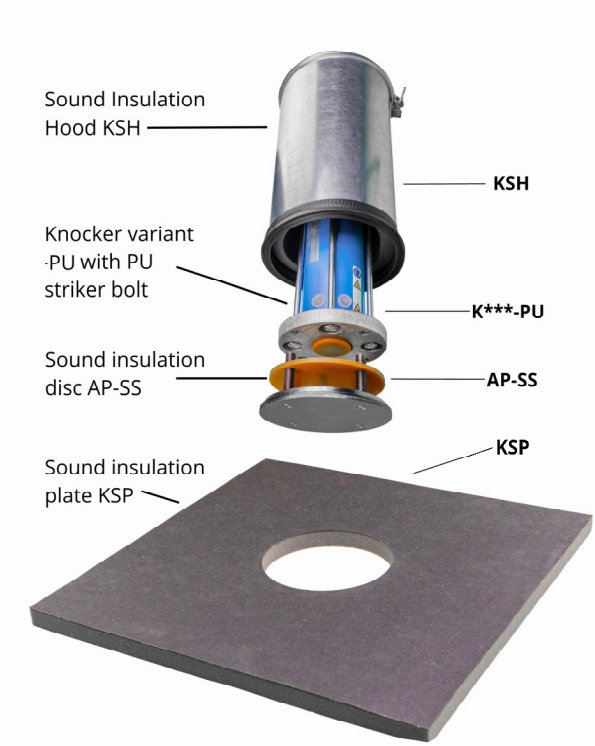


General

A pneumatic knocker has the greatest effect when the impact is undamped on the silo wall. The undamped knocker reaches a sound level of 95 to 100 dB(A). This sound is transmitted to the silo wall and possibly into the building by structure-borne sound. In a full silo, the vibrations of the silo wall are damped by the stored product.

If the impact is damped by rubber-elastic materials, the effect of the knocker is reduced along with the noise. According to the principle of linear momentum (F*t=m*v), the force F decreases as the time t increases.

Knocker Variant - PU

When using the pneumatic knocker variant type K***-PU with a striker made of Vulkollan (PU), the noise development is reduced by approx. 5 dB(A).

Sound Insulation Disc AP-SS

Noise can also be reduced with a Vulkollan sound insulation disc type AP-SS, which is clamped between the welding plate and the knocker. It can be easily retrofitted.

Since the generated sound level can essentially only be reduced by sound insulation without loss of effect, the following additional devices can be obtained from us:

SOUND INSULATION HOOD KSH						
Type	KSH 40	KSH 63	KSH 80	KSH100	KSH125	KSH160
Diameter	162	187	212	262	312	412
Length	243	273	328	415	525	614
Weight in kg	1,615	2,137	2,864	4,475	6,815	14,20

SOUND INSULATION PLATE KSP						
Type	KSP 40	KSP 63	KSP 80	KSP100	KSP125	KSP160
Length	490	490	490	490	990	990
Width	490	490	490	490	990	990
Weight in kg	0,395	0,384	0,371	0,333	1,620	1,557

Sound Insulation Hood KSH

The sound insulation hood KSH is slipped over the knocker and screwed to its middle bolt with an extension. A rubber edge protector is clamped onto the contact surface of the silo, which adapts to the silo's contours. For smaller silos, the sheet metal of the sound insulation hood must be adapted to the silo shape. Make sure that there is no air gap between the sound insulation hood and the silo wall, otherwise, the sound insulation will be considerably reduced. The sound insulation hood is equipped with a rubber bushing for the compressed air hose and with a silencer for the rinsing air.

Further measures

If structure-borne sound is transmitted from the silo to the building, the silos must be suspended elastically.
The working area can also be specifically shielded by sound-absorbing walls.
In special cases, please contact companies responsible for sound insulation measures.

Sound Insulation Plate KSP

The sound insulation plate KSP insulates the sound radiation from the container near the knocker, but without damping the vibrations generated by the knocker. The special material manufactured for us has the following technical values:

Airborne sound absorption:	41 dB(A)	(at 1000 Hz)
Airborne sound insulation:	25 dB(A)	(at 1000 Hz)
Loss factor:	0,13	(at 200 Hz, 20°C)
Weight per unit area:	4,3 kg/m²	

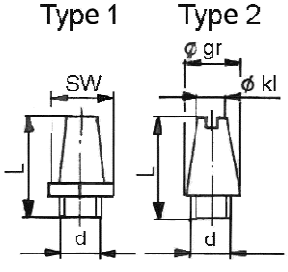
The sound insulation plates KSP are cut out in the middle so that they fit over the sound insulation hood KSH.... For installation, the protective wrapping is removed and the sound insulation plate KSP is pressed against the silo wall. If a larger area is to be soundproofed, we supply sound insulation plates SP made of the same material.

Type: SP 1/2	990 mm x 990 mm x 22 mm
Type: SP 1	1990 mm x 990 mm x 22 mm

Make sure that there are no gaps between the individual plates, otherwise the effect of the sound insulation will be greatly reduced. The adhered sound insulation plates SP... can be additionally fastened with galvanised binding wire and painted with a solvent-free dispersion paint in the desired colour.

Silencer

To dampen venting noise, silencers are screwed into the venting holes of the solenoid valves.



SILENCER						
Part No:	524001	524002	524003	524004	524005	524006
d	R 1/8“	R 1/4“	R 3/8“	R 1/2“	R 3/4“	R 1"
Type	2	2	1	2	2	2
⌀ kl	8	9		18,5	20	25
⌀ gr	11	14		24	29	36
SW			22			
L	29	34	36	44	54	65
Weight in g	8	15	34	67	128	203

Phone: +49 8232 / 50 386-0
E-Mail: info@singold-tech.de
Website: www.singold.tech