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Pneumatic Impactors Series PKL

- For loosening stubborn adhesions in silos, containers and pipes
- Higher impact than conventional impactors
- Low compressed air requirement per stroke
- Silenced EE version with elastomer impact plate
- Versions with self-control ST
- Versions compliant to ATEX or in stainless steel (from PKL 1000) available



PKL 450



PKL 740



PKL 1000



PKL 5000



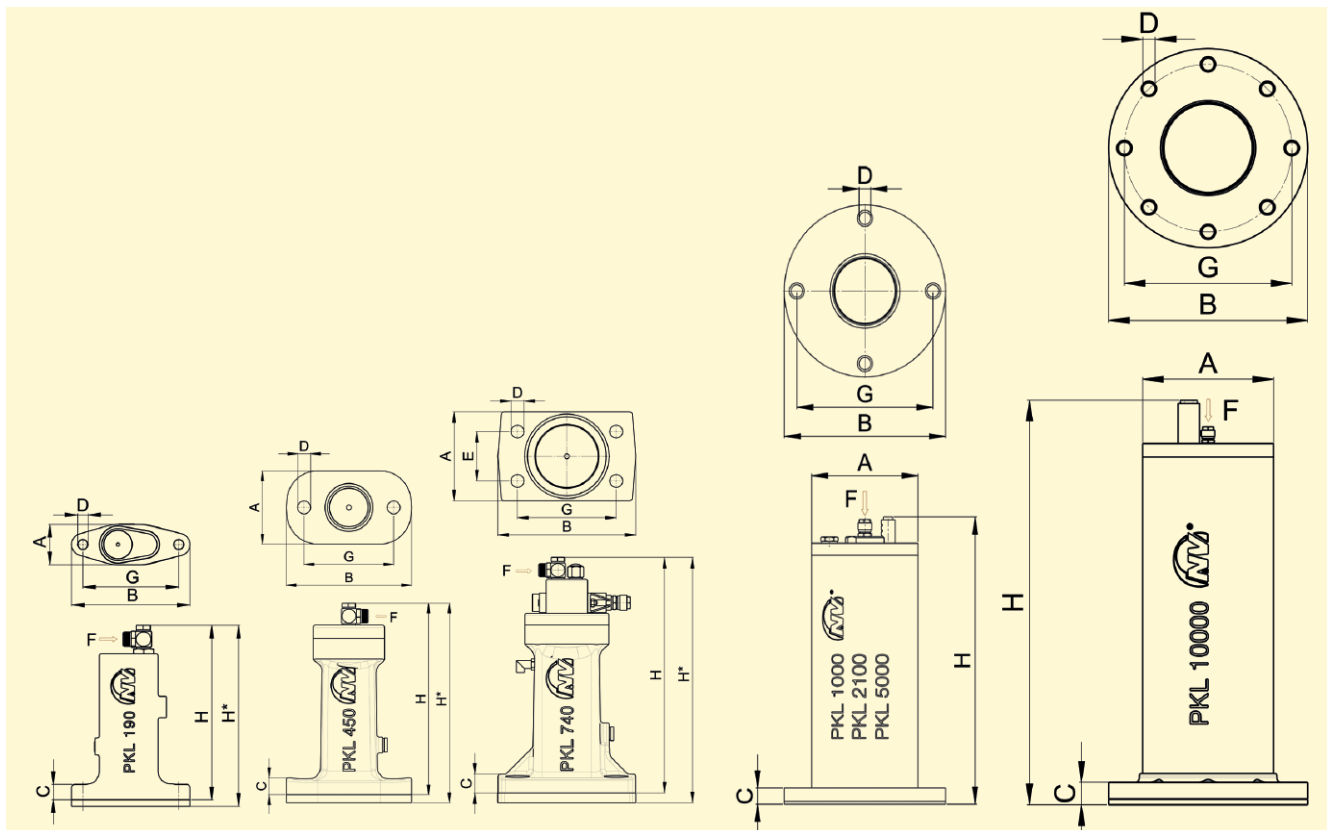
NetterVibration



Pneumatic Impactors Series PKL

Type	Piston weight	Force of impact*	Optimal operating pressure	Air requirement/impact at optimum pressure	Total weight	Suitable for wall thickness
	[kg]	[kg]	[bar]	[Normalliter]	[kg]	[mm]
PKL 190/4	0.19	0.43	4.0	0.20	0.8	1 - 2
PKL 190/6	0.19	0.60	6.0	0.20	0.8	1 - 2
PKL 450/4	0.44	0.56	4.0	0.40	1.6	1 - 3
PKL 450/6	0.44	0.92	6.0	0.60	1.6	1 - 3
PKL 740/3	0.74	1.30	3.0	0.50	2.6	2 - 4
PKL 740/4	0.74	1.80	4.0	0.70	2.6	2 - 4
PKL 740/5	0.74	2.10	5.0	0.80	2.6	2 - 4
PKL 740/6	0.74	2.70	6.0	1.00	2.6	2 - 4
PKL 1000/4	1.0	2.80	4.0	2.7	5.7	2 - 4
PKL 1000/6	1.0	4.30	6.0	4.0	5.8	3 - 5
PKL 2100/4	2.10	4.20	4.0	5.20	6.7	3 - 5
PKL 2100/5	2.10	6.20	5.0	6.50	6.9	3 - 5
PKL 5000/4	4.96	6.60	4.0	5.70	16.0	4 - 8
PKL 5000/4 S	4.96	6.60	4.0	5.70	16.0	4 - 8
PKL 5000/6	4.96	10.60	6.0	8.60	16.5	6 - 12
PKL 5000/6 S	4.96	10.60	6.0	8.60	16.5	6 - 12
PKL 10000/6	10.00	17.50	6.0	15.10	34.0	> 10

* The impact force corresponds to the effect of the specified weight, which falls from a height of one metre.



Type	A [mm]	B [mm]	C [mm]	Ø D [mm]	E [mm]	F	G [mm]	H [mm]	H* with EE kit [mm]
PKL 190	38.0	111	15	9	-	G 1/8, NW 6 x 1	90	163.5	169.5
PKL 450	73.5	126	14	13	-	G 1/8, NW 6 x 1	90	192.0	200.0
PKL 740	90.0	140	15	13	50	G 1/8, NW 6 x 1	100	238.5	248.5
PKL 1000	Ø 88.9	Ø 140	13	13	-	G 1/8, NW 6 x 1	Ø 116	266.0	-
PKL 2100	Ø 120.0	Ø 180	17	13	-	G 1/8, NW 6 x 1	Ø 152	300.5	-
PKL 5000	Ø 114.3	Ø 180	22	17	-	G 1/8, NW 6 x 1	Ø 152	376.5	-
PKL 10000	Ø 145.0	Ø 220	25	17	-	G 1/8, NW 6 x 1	Ø 185	445.0	-

Pneumatic Impactors Series PKL



ST kit

Application areas

The ST kit allows a continuous impact sequence with a permanent supply of compressed air.

Design and function

The impact frequency can be adjusted by a throttle valve built into the supply air. The maximum impact sequence is to be observed.



EE kit

Application areas

The kit EE is used to generate a silenced impact ("rubber hammer effect").

Design and function

A spacer plate with an impact plate made of elastomer is installed between the impactor and the mounting surface.. From PKL 2100 upwards, the steel impact plate is replaced by an elastomer plate. The use of the elastomer impact plate significantly reduces the sound level.



Special versions for ATEX, stainless steel and high temperature

PKL E (ATEX)

Pneumatic interval impactors of the series PKL E comply with the directive 2014/34/EC equipment group II and are suitable for the use in explosive areas of the category 2 (2G and 2D 85 °C [T6]) in zones 1, 2, 21 and 22.

PKL S (stainless steel)

Stainless steel impactors meet the special requirements for the chemical resistance of surfaces.

PKL HT (high temperature)

The HT series is designed for use up to an ambient temperature of 160 °C.



Weld-on consoles

Application areas

Weld-on consoles ASB and weld-on plates ASP in even and round versions are suitable for mounting on rectangular, round and conical containers.

They enable optimal transmission of the impulse triggered by the impactor, thereby reducing the load on the weld seams and container walls.

Design and function

The weld-on consoles are welded directly to the container wall.

The impactors are mounted on the weld-on consoles using the NBS fastening kits.



Glueing consoles

Application areas

The Netter glueing console of the series NKK is used where vibrators and impactors should not be fastened by welding. These may be containers, silos or other equipment which are knocked or vibrated, including cleaning, loosening or emptying.

Design and function

The glueing console can be easily mounted during ongoing production. All parts needed for glueing are included in the set. The console serves as a connecting element between impactor and construction. After cleaning, the glueing console can be glued to the desired component.



NBS fastening kits

Application areas

The NBS fastening kits are used for secure and permanent attachment of PKL impactors.

Design and function

The kits consist of special screws, dampers, washers, nuts and lock plates, which are designed for the respective application. Rebounds from the impactors are damped by the springs.



Control valves

Application areas

Way valves are required to control the interval impactors. Operation is possible by hand or via a corresponding electronic timer. Our product range includes electric, pneumatic and manually controllable valves.



Timers AP and PAP

Application areas

The electronic timers are used to control interval impactors, solenoid valves and motor contactors wherever a workflow should be regulated time-wise. In addition, their usage significantly reduces the continuous sound level.

Design and function

The AP 117 controls solenoid valves, which enable a change between duty and pause time. In addition, pneumatic electronic timers of the series PAP, which directly control the supplied compressed air and can be used in wet zones, are available.



Pneumatic Impactors Series PKL



Sound protection hoods

Application areas

It is worthwhile using soundproof hoods, especially in bunkers with insulating cladding. By attaching the soundproof hoods to the insulating cladding, the sound source (bunker) is completely insulated.



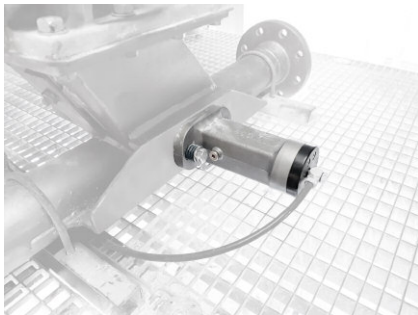
Vacuum mounts VAC

Application areas

Vacuum mounts of the VAC series are used for fast attachment to smooth, but also to rough and curved surfaces. They allow quick and easy attachment without welding or screw connections.

Design and function

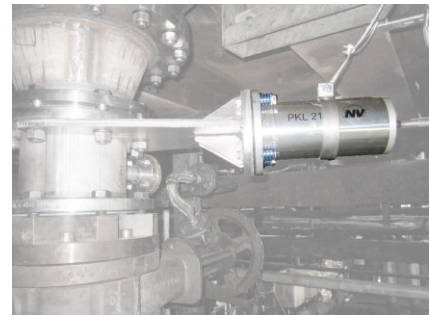
As soon as compressed air is supplied to the VAC, it sucks firmly, thus ensuring a force-locked connection between the impactor and the subsurface. ATEX-compliant mounts and units with stainless steel plates are available.



PKL 450 for loosening adhesions



PKL 740 for cleaning bunker walls



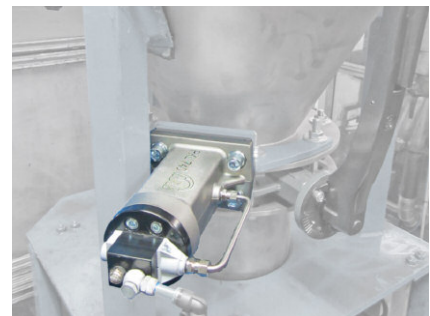
PKL 2100 for loosening adhesions



PKL 190 for improving material flow



PKL 5000 for cleaning heat exchangers



PKL 740 for loosening bridge formations

Application areas

Pneumatic interval impactors series PKL are particularly suitable for knocking adhesions, which are difficult to remove, off the walls of pipes and containers. PKL are also used when, for example, bridges and tube or manhole formations are to be loosened, or silos or containers emptied completely.

Design and function

PKL impactors allow effective and gentle cleaning at the same time. Movements resembling a hammer blow remove strongly adhering materials from the wall.

In the PKL, compressed air goes under the piston and presses it against a spring. When venting, the spring relaxes and thereby shoots the piston abruptly against a plate. The intentionally initiated impulse protects the construction (like tank wall or pipe). PKL can be operated with oil-free compressed air.

For actuation a way valve is required, which is optionally available. Safe operation is guaranteed at ten impacts per minute. The impactors, however, can be clocked higher if necessary.

Permissible operating conditions

Drive medium:

Compressed air or nitrogen (filter $\leq 5 \mu\text{m}$), preferably with mist lubricant

Operating pressure:

2,5 bar to 6 bar

Ambient temperature:

-20 °C to 60 °C (HT version up to 160 °C)

NetterVibration offers the right accessories required for the mounting, installation and control of vibrators and interval impactors.

Netter provides solutions.

Consult our experienced application technicians.

Netter GmbH

Fritz-Lenges-Str. 3
55252 Mainz-Kastel

- Germany
- Switzerland
- Poland
- Spain
- Australia

www.**NetterVibration**.com
info@**NetterVibration**.com