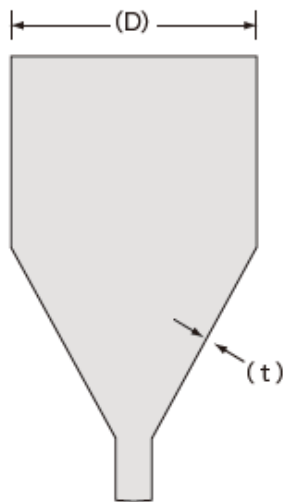


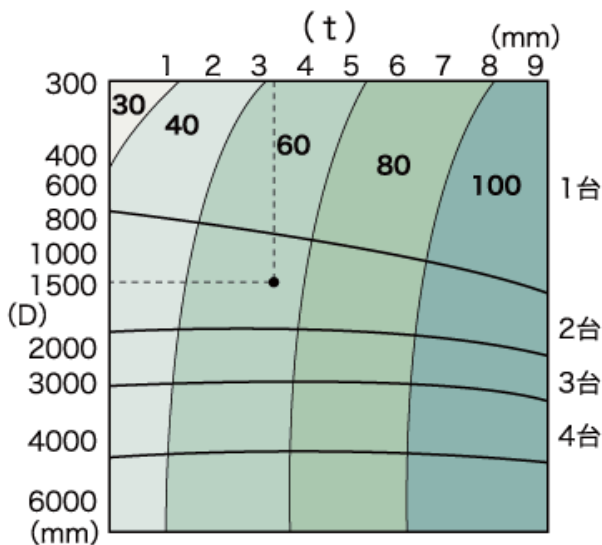
Knocker model selection/installation method

Air knocker model selection/installation method

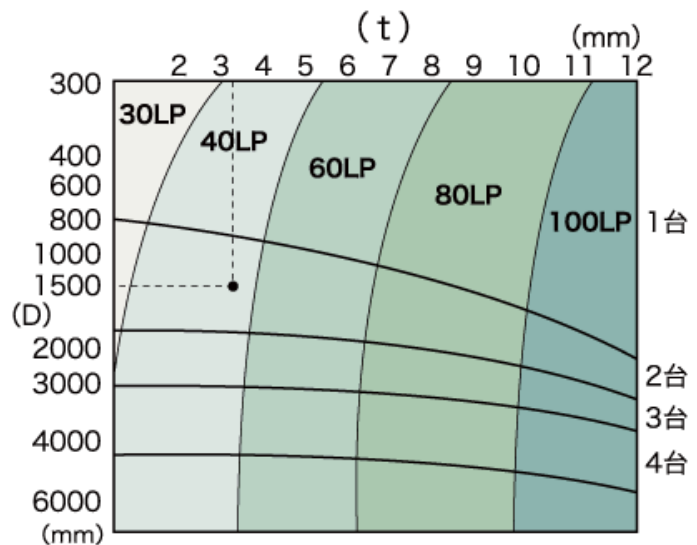


The model is determined by the plate thickness (t) of the mounting part, and the number of units is determined by the volume. The selection may differ depending on the shape of the hopper and the powder properties. Please contact us for details.

Example: If the hopper diameter (D) is 1500 mm and the plate thickness (t) is 3.2 mm, check the model and number of units from the selection table. Standard type SK-60... 2 units / LP type SK-40LP... 2 units



標準タイプ
Standard Type

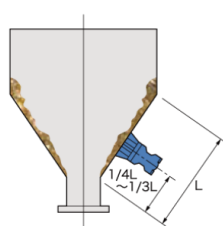


LPタイプ
Long Piston Type

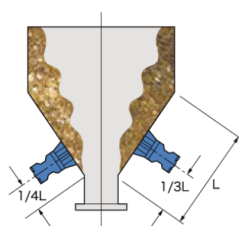
If you are unsure about which model to choose

SK Series	This is the standard air knocker with a long track record. It is the most widely used series both in Japan and overseas.
SV Series	The impact force can be changed by adjusting the pressure, allowing you to use it under optimal conditions.
SKL Series	This series can be used in clean environments such as pharmaceuticals and food. The body is made of resin, making it lightweight.

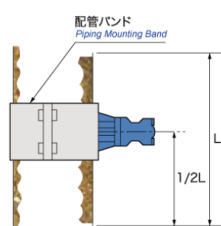
Air knocker installation position



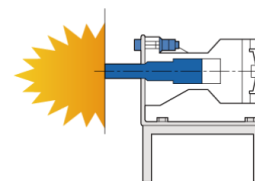
This is an example of the installation position. One example is to use a hammer or similar tool on-site to determine the most effective position.



When installing multiple air knockers on one hopper, the heights of the installation positions may be shifted to prevent interference between shock waves generated by simultaneous knocking.



When attaching to pipes, the attachment position may change depending on the situation. The pipe band makes it easy to change the striking position.



The LP type can be installed on objects with rotating or moving striking positions by fixing it with a stay or the like.

*The installation position shown in the above diagram is a rough guide. Depending on the shape and angle of the object, the condition of the contents, etc., it may be better to change the installation position. Please feel free to contact us for detailed selection.

When installing in a high temperature area

The heat resistance temperature of the standard specification air knocker is 60°C. If you continue to use the standard specification air knocker in an atmosphere of 60°C or higher, it may cause damage to the device itself or it may not be able to perform as intended. When installing in a high-temperature area, it is necessary to change the magnetic piston, O-ring, piston ring, and grease to heat-resistant ones, or take measures to prevent heat from being applied to the air knocker. For details, please contact your dealer or our company.

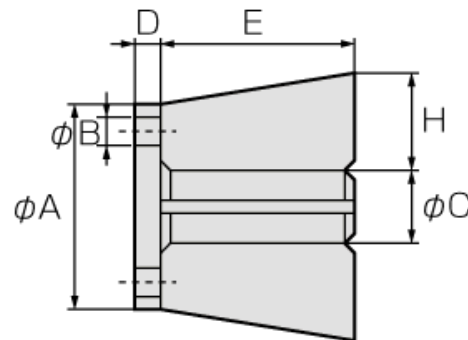
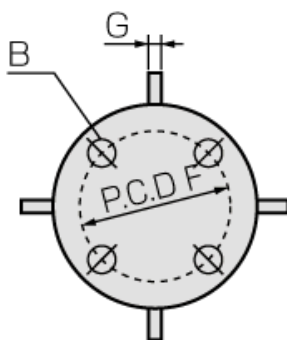
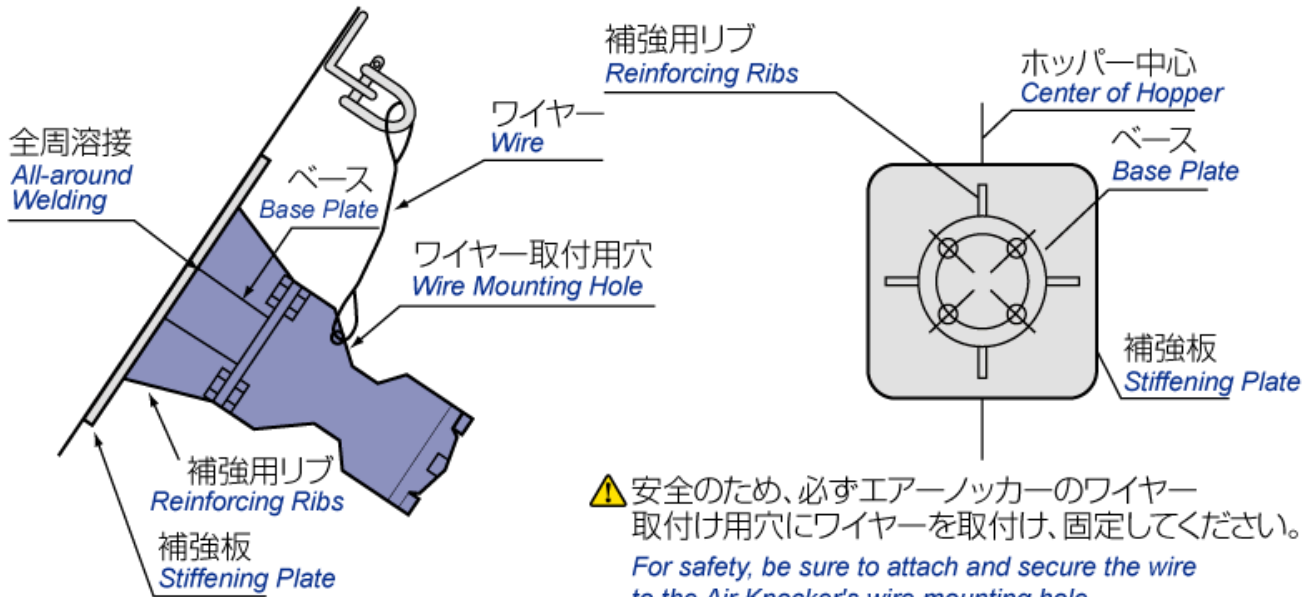
When installing in dusty areas

We recommend that you install a filter at the exhaust port of the main unit. This will prevent dust from entering through the exhaust port and extend the life of the knocker body.

How to install the air knocker

1. Please weld the pipe part of the base plate attached to the air knocker all around at the installation position. Be sure to attach a reinforcing plate at the installation position. For details, please refer to (Fig. 4, 5).
 2. Be sure to attach the reinforcing ribs according to the shape of the object to which they are to be attached. For details, refer to (Fig. 3-1).
 3. Attach the air knocker to the base plate using the included bolts, nuts, and washers.
 4. The air knocker body has a hole for attaching a wire. For safety, be sure to attach a wire or chain and secure it to the stand. (See Figure 2 and the "Fall prevention wire" section on this page.)
- ✓ Be sure to weld all around. Weld as thickly as possible and use a welding rod with as much tenacity as possible.
 - ✓ Avoid attaching it to the weld line as much as possible. If you absolutely must attach it, grind away the weld build-up at the attachment position and around it to make it flat, and then attach a reinforcing plate.

Standard Type

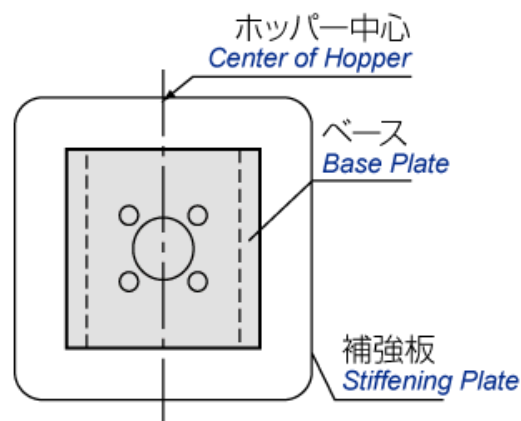
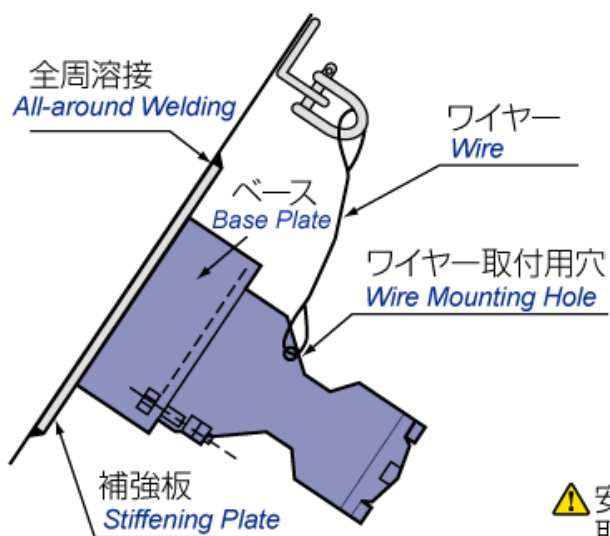


⚠️ ベースプレートリブは安全のために必ず取付けてください。
Base plate reinforcing ribs must be installed for safety.

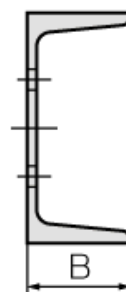
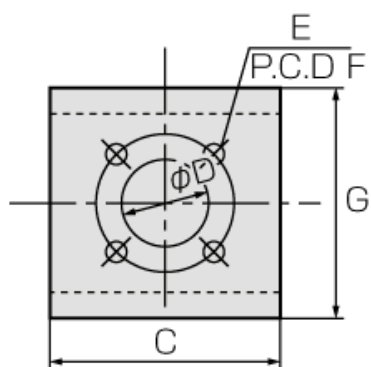
Unit: mm

Model	φ A	B	φ C	D	E	PCD F	G x number of sheets	H
SK-30	70	4-φ 9	27.2(3/4B)	6	40	55	4.5×4	35
SK-40	95	4-φ 14	34.0(1B)	12	90	70	6×4	45
SK-60	140	4-φ 16	76.3(2 ¹ /2B)	12	100	110	6×4	60
SK-80	150	4-φ 18	76.3(2 ¹ /2B)	14	110	120	6×4	70
SK-100	210	4-φ 22	114.3	twenty two	145	170	12×6	90

LP (long piston) type



⚠ 安全のため、必ずエアノッカーのワイヤー取付け用穴にワイヤーを取付け、固定してください。
 For safety, be sure to attach and secure the wire to the Air Knocker's wire mounting hole.

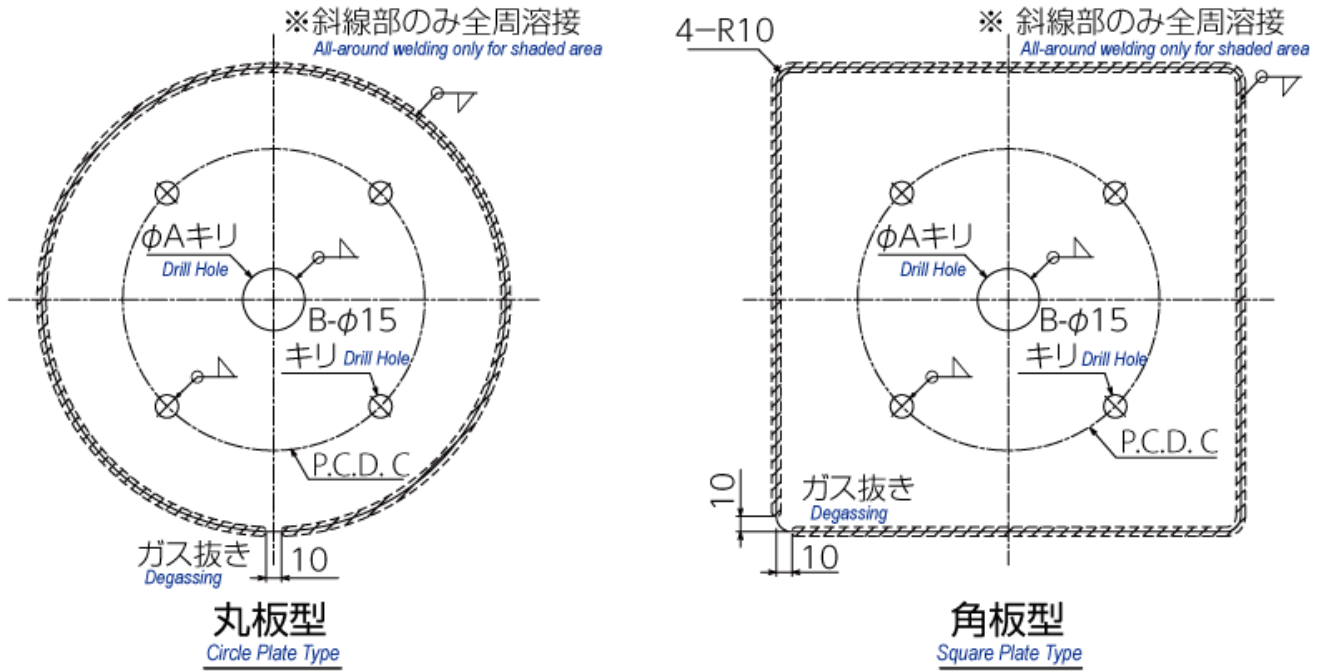


Unit: mm

Model	B	C	φD	E	PCDF	G
SK-30LP	50	100	twenty five	4-φ9	55	100
SK-40LP	75	150	47	4-φ14	70	150
SK-60LP	90	200	64	4-φ16	110	200
SK-80LP	90	200	75	4-φ18	120	200
SK-100LP	90	250	85	4-φ22	170	250

How to fix the reinforcing plate

Reinforcement plate dimensions (reference) [For standard type]

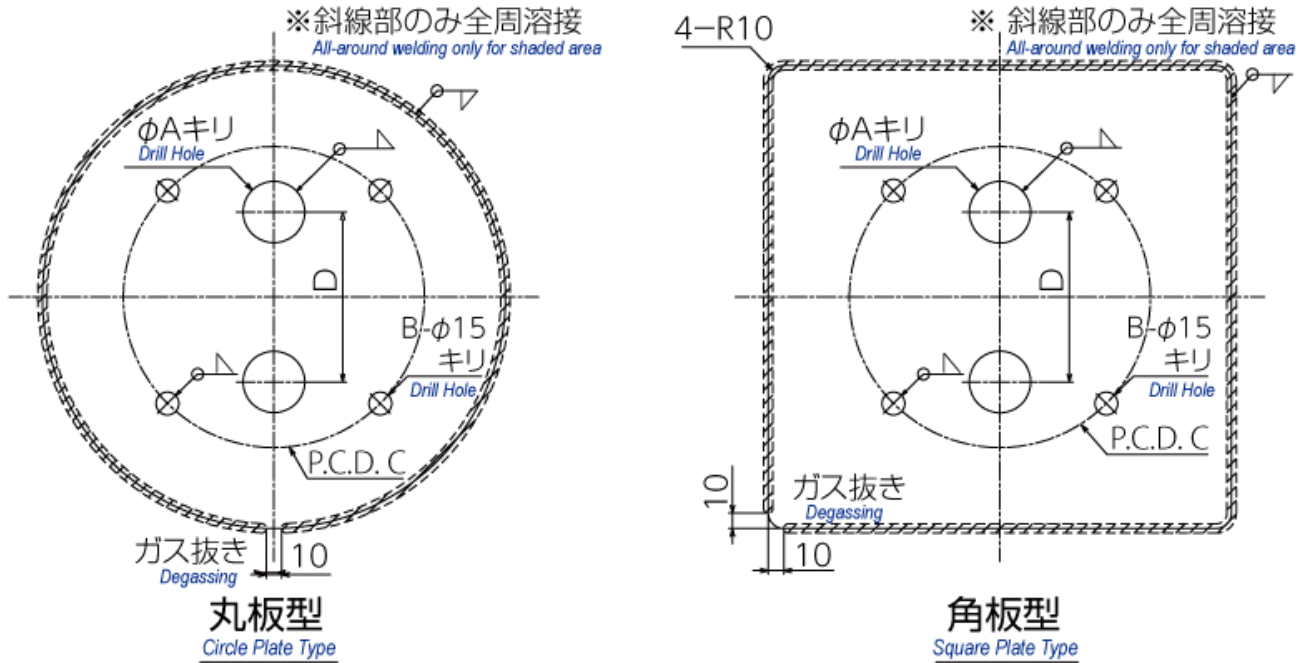


Unit: mm

Model	Round plate	Square Plate	φ A	B	C
SK/SV/SKL-30	φ 150 × t3.2(3.0)	□150 × t3.2(3.0)	15	0	-
SK/SV/SKL-40	φ 250 × t3.2(3.0)	□250 × t3.2(3.0)	15	4	130
SK/SV/SKL-60	φ 300 × t4.5(4.0)	□300 × t4.5(4.0)	40	4	195
SK/SV/SKL-80	φ 350 × t6.0(6.0)	□350 × t6.0(6.0)	40	4	205
SK-100	φ 450 × t9.0(9.0)	□450 × t9.0(9.0)	60	6	295

*The figures in parentheses are for SUS.

Reinforcement plate dimensions (reference) [For long piston type]



Unit: mm

Model	Round plate	Square Plate	φ A	B	C
SK-30LP	φ 150 × t3.2(3.0)	□ 150 × t3.2(3.0)	15	0	
SK-40LP	φ 250 × t3.2(3.0)	□ 250 × t3.2(3.0)	15	4	130
SK 60LP	φ 300 × t4.5(4.0)	□ 300 × t4.5(4.0)	40	4	195
SK-80LP	φ 350 × t6.0(6.0)	□ 350 × t6.0(6.0)	40	4	205
SK-100LP	φ 450 × t9.0(9.0)	□ 450 × t9.0(9.0)	60	6	295

* The figures in parentheses are for SUS.

Recommended welding rod

In the case of SS

[For hand bars]...JIS Z3211E4316 equivalent (Kobe Steel LB-26)

[Semi-automatic]...JISZ3312YGW12 equivalent (Kobe Steel SE-50T)

In the case of SUS304

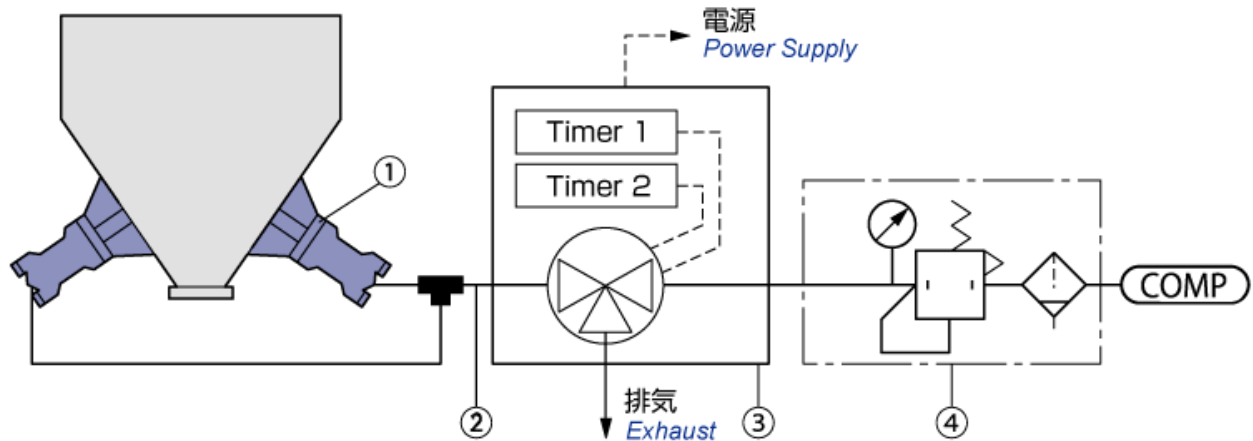
[For hand bars]...JIS Z3221ES308-16 equivalent (Kobe Steel NC-38)

[Semi-automatic]...JISZ3323T308-FB0 equivalent (Kobe Steel DW-308)

[TIG welding]...JIS Z3321YS308 equivalent (Kobe Steel TG S308)

- ✓ When operating, the welded parts are subjected to a large impact. Please weld as thickly as possible.
- ✓ If any damage such as cracks occurs, immediately stop operation.
- ✓ Attach the base plate to the object in the direction of the arrow as shown in Figure 6. (If you make your own base plate, you can attach it so that the bolt holes are symmetrical in the vertical direction.) This method applies the load evenly to the four base plate bolts, so there is less adverse effect on the knocker body.

Air knocker related equipment



① Mounting base plate

Be sure to weld the reinforcing ribs to the base plate that comes as standard.

② Piping materials

Since the air knocker vibrates when struck, steel pipes are not suitable for piping. Please use nylon tubes, Teflon tubes, rubber hoses, etc. (Inner diameter 6 mm, outer diameter 8 mm)

③ Three-way solenoid valve/timer

In order to operate the air knocker, compressed air needs to be pumped in and out, which is why a three-way solenoid valve is required. We use a valve with an aperture of Rc1/4 as the standard. A timer is also required to automatically control the three way solenoid valve.

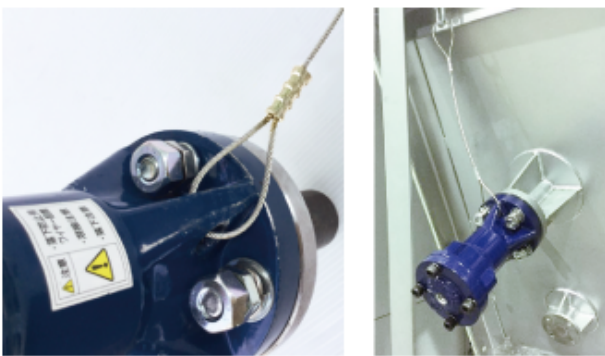
④ Filter regulator

Filter regulators are also effective in extending the life of your knocker.

Please use instrumentation air or dry air for the compressed air to operate the air knocker. If you use compressed air that may contain moisture, we recommend that you use an air filter, air dryer, etc. as auxiliary equipment.

Fall prevention wire

For safety, attach the air knocker to the stand with a wire or chain. For the SK and SV series of air knockers, attach the wire to the wire mounting hole on the main body and use a shackle to attach to the bracket on the stand.



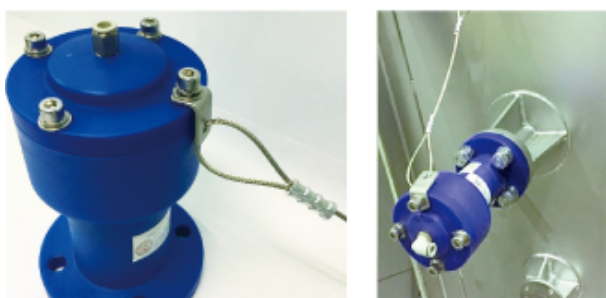
Wire for SK and SV series

Model	Wire diameter	Wire length (mm)
SK-30 Series SV-30	φ 2	500
SK-40*1 series SV-40	φ 2	500
SK-60 Series SV-60	φ 3	500
SK-80 Series SV-80	φ 3	500
SK-100 Series	φ 4	1,000

*1SK-40(SUS) and SK-40LP(SUS) have a wire diameter of φ 3.

The wire for the SKL series (engineered knocker) is attached to the hole of the L-shaped metal fitting attached to the head flange of the main body. The wire's stand side is attached using the included shackle, just like the SK and SV series.

**Wire for SKL type
(engineered knocker)**



Model	Wire diameter	Wire length (mm)
SKL 15	φ2	500
SKL-30	φ2	500
SKL-40	φ2	500
SKL-60	φ3	500
SKL-80	φ3	500

Attach the bracket (hanging hardware) so that the wire is suspended as directly above as possible. At that time, the effect of the wire will be greater if the wire is not slackened. If the wire is too long or the bracket can only be attached at a height shorter than the wire length, it is effective to wrap the wire halfway and tie it with a cable tie to minimize wire slack.