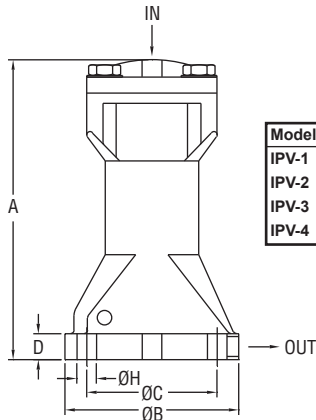
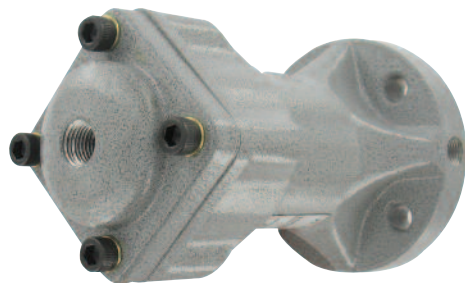




Series IPV Air Hammer

Specifications - Installation and Operating Instructions



| Model | A | ØB | ØC | D | ØH | Connection |
|-------|-----------------|----------------|----------------|---------------|---------------|------------|
| IPV-1 | 5.43" (138 mm) | 3.15" (80 mm) | 2.36" (60 mm) | 0.47" (12 mm) | 0.35" (9 mm) | 1/4" |
| IPV-2 | 6.54" (166 mm) | 3.94" (100 mm) | 2.95" (75 mm) | 0.63" (16 mm) | 0.43" (11 mm) | 1/4" |
| IPV-3 | 8.19" (208 mm) | 5.51" (140 mm) | 4.13" (105 mm) | 0.63" (16 mm) | 0.59" (15 mm) | 1/4" |
| IPV-4 | 10.56" (269 mm) | 6.77" (172 mm) | 5.51" (140 mm) | 0.94" (24 mm) | 0.75" (19 mm) | 3/8" |

IPV Series Air Hammers

- One impact wave caused by one shot
- High strength aluminum structure
- Impact force and interval timing can be set based on requirement
- Magnetic hammer stores magnetic strength to increase the piston's impact power

Series IPV Air Hammer (single impact model) focuses on a limited target. Other equipment of the target is minimally affected by it. The air hammer's impact won't separate water out of humid mixtures. It is often applied onto a pipe or clean elbow in a tank filled with humidity or low specific gravity material.

HOW IT OPERATES

The IPV series air hammer contains a powerful magnet inside the hammer. The hammer and magnet are tightly closed before activation. However, as the inlet air pressure gets higher than the force, this tightens the hammer and magnet. The hammer and magnet will separate and cause more strength for impact power. The spring will bring the hammer back to the initial position automatically after the impact. By doing this, the air pressure will be released and the strength of the air pressure will be delivered to the target impact container. It will help to smooth the flow and prevent accumulation inside the container.

| Model | Impulse lbf•s (N•S) | Air Consumption in ³ (l) per stroke | Weight lb (kg) |
|-------|------------------------|---|-------------------|
| IPV-1 | .225 (1.0) | 1.71 (0.028) | 2.43 (1.1) |
| IPV-2 | .630 (2.8) | 5.0 (0.082) | 3.97 (1.8) |
| IPV-3 | 1.66 (7.4) | 14.0 (0.228) | 8.82 (4.0) |
| IPV-4 | 2.81 (12.5) | 27.8 (0.455) | 18.52 (8.4) |

SPECIFICATIONS

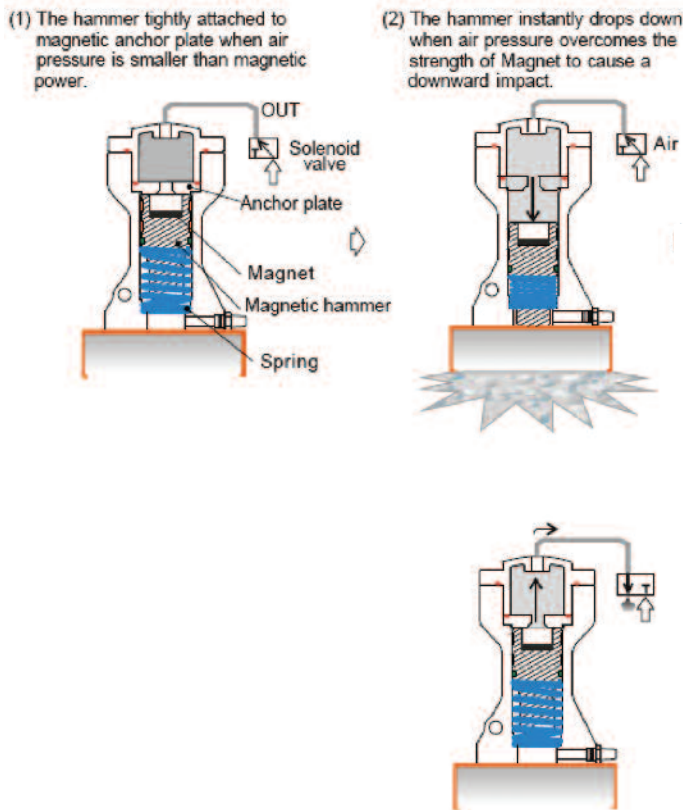
Temperature Limit: 212°F (100°C).

Noise Level Range: 60-75 dBA.

Supply Pressure: 43.5 to 87 psi (3 to 6 bar).

Air Consumption: See model chart.

Air Connection: 1/4" BSPT female with 1/4" OD push to connect adapter on IPV-1, IPV-2 and IPV-3; 3/8" BSPT female with 3/8" OD push to connect adapter on IPV-4. Also includes muffler for exhaust port.

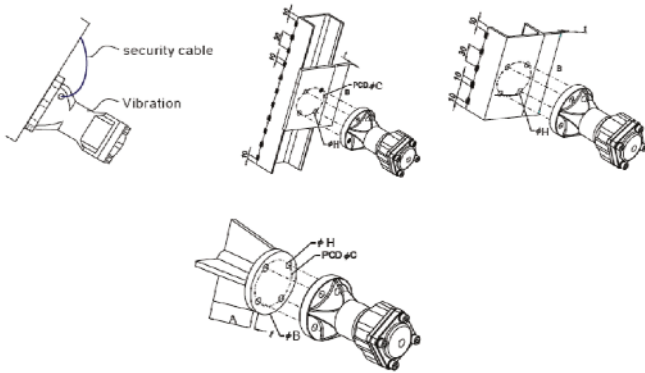


INSTALLATION

Vibration force transmits more efficiently in a conical hopper tank as opposed to a rectangular hopper. It is recommended that you install two vibrators in rectangular hoppers.

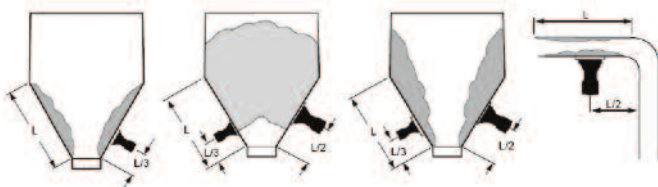
1. Vibrator force can be transmitted more efficiently by using "U" shape steel supports. It can help materials run smoother in the tank or pipe. It also reduces tank damage accidents.
2. To avoid tank wall amplitude caused by the vibrator moving in a left or right direction, use "U" shape steel.
3. Reinforced board is required between "U" shape steel and a thin tank wall.
4. To increase vibration fields in a big hopper tank, criss-cross "U" shape steel.

Attention: Vibration has to be fixed by a high tension bolt, washer, and spring washer. Connect with a security cable if the vibrator is installed onto a hopper.



NOTES:

Various tanks are based on application requirement. Customers choose appropriate vibrator types to meet with various applicant demand (tank shape, material, applied material, etc). Suitable vibrators will not only prevent obstruction problems but won't damage the tank walls. Large amplitude and low frequency piston types fit in granule with low specific gravity applied material. It is recommended to use multiple vibrators in serious clog situations or large tank surroundings. According to various clog situations, required vibrations and suitable install positions (usually 1/2 L or 1/3 L) are shown below.



Vibration Force Calculation

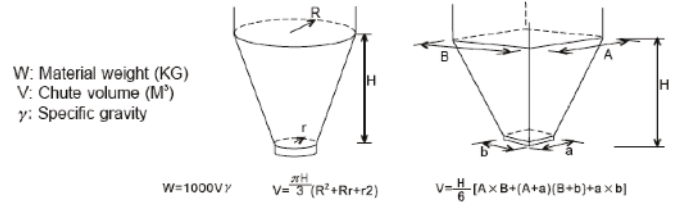
Taking the accumulated situation into consideration, the appropriate vibrator will give 0.2~0.5 G accelerated vibration onto the target object.

$F = 0.2-0.4 GW$

F: Vibration force (N)
G: Acceleration of gravity
W: Material weight (KG)

Material Weight Calculation

Generally speaking, the hopper portion of the tank should be taken into consideration.



MAINTENANCE

Upon final installation of the Series IPV Air Hammer, no routine maintenance is required. A periodic check of the system calibration is recommended. The Series IPV is not field serviceable and should be returned if repair is needed (field repair should not be attempted and may void warranty). Be sure to include a brief description of the problem plus any relevant application notes. Contact customer service to receive a return good authorization number before shipping.