

# WHEN MATERIAL GETS STUCK

## **INDUSTRIAL VIBRATORS SOLVE FLOW PROBLEMS**

### **MATERIAL FLOW PROBLEMS**

Storing bulk material in bins and hoppers can often come with flow problems. Common issues can be the result of **bridging**, **arching**, **ratholing and clinging**. Industrial Vibrators help to rectify and prevent problems, ensuring efficient, continuous material flow.



OT (Turbine vibrator) - Chute on concrete mixer

#### **Bridging & Arching**

Bridging is the most common of all flow problems usually generated by easily compacted material forming a bridge across the outlet. The longer the product remains the higher the compaction will be. Arching refers to when the compaction grows further, higher into an arch.

#### Ratholing

Ratholing is brought about by product segregation. This leads to compaction of the finer material and permits larger material to flow down a funnel where pressures are less. The result is a major reduction in the live capacity of the vessel.

#### Clinging

Clinging is product remaining in the hopper or silo. This normally occurs due to poor design and low valley angles. The longer the material remains the worse the problem becomes. Clinging leads to lower capacity and can be detrimental particularly where contamination is an issue.



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#### **Turbine Vibrators**

Perfect for small to medium bins and hoppers. Quieter operation uses less energy. Ideal when noise is a consideration. These precision-made vibrators require no lubrication making them ideal for food applications.

Typically used for:

- Food/Internal applications
- Hoppers, bins and chutes
- Silos



### **Roller Vibrators**

With greater working moment and ample force, Roller Vibrators are easy to install and will provide years of trouble-free operation in applications where material can be more stubborn to move. Ideal for applications requiring substantial force and with a larger particle.

Typically used on:

- Hoppers, bins and chutes
- Silos
- Aggregate bins



#### **Ball Vibrators**

Regarded as the workhorse of the range, Ball Vibrators are low cost, easy to install and will provide years of trouble-free operation in the most difficult conditions. Ideal for applications requiring less force and quieter operation.

Typically used on:

- Hoppers, bins and chutes
- Silos



### Piston Light & Heavy Duty

Many difficult materials need to be shocked into movement due to their ability to interlock and generate high compaction forces.

The linear operation Piston Vibrators are a proven answer with high impact force outputs that deliver timed individual strikes.

These are suited to stubborn flow problems like sticky material and includes direct impact as well as air cushioned models.

Typically used on:

• Hoppers, bins and chutes.



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This is a proven method of overcoming flow problems in large storage facilities such as bunkers, bins, or silos. These systems offer easy installation and extremely low maintenance.

These are used on:

- · Hoppers, bins and chutes
- Silos
- Storage systems





Use reliable and economical electric power to improve flow, feed, separate or compact.

These are used on:

- Feeders
- Screens
- · Hoppers, bins and chutes
- Silos



#### **Truck Vibrators**

Thoroughly unload bulk solids from dump truck beds using industrial vibration. High frequency combined with powerful vibratory force will dislodge the most difficult materials from truck bodies and spreaders.

These are used on:

- Tipper bodies
- Spreaders
- Live bottom floors

They boost productivity by unloading each truckload and getting trucks back on the road fast.



#### **Air & Hydraulic Vibrators**

Vibration that works reliably in applications where electricity is not available.

Typically used in industries

- Transport
- Agriculture
- Railway



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### **INDUSTRIES**

- Aggregate
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- Steel
- Mining & Quarries
- Biomass
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- Smelters & Foundries
- Ports & Terminals
- Pulp & Paper



For over 15 years, Bulkquip Pty Ltd (Bulkquip) has proven to be a timely and an efficient provider of parts, systems, and service to bulk materials handling operations in NSW/ ACT, Australia. Bulkquip has the experience and expertise for many flow aid applications and guarantees the best solutions. With over 15 years of experience in the application of Industrial Vibrators, Bulkquip delivers material flow solutions that will prevent bin and hopper flow problems.

# **CONTACT BULKQUIP**

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