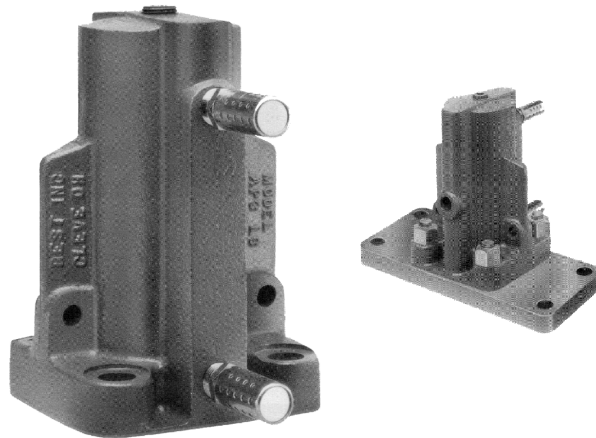
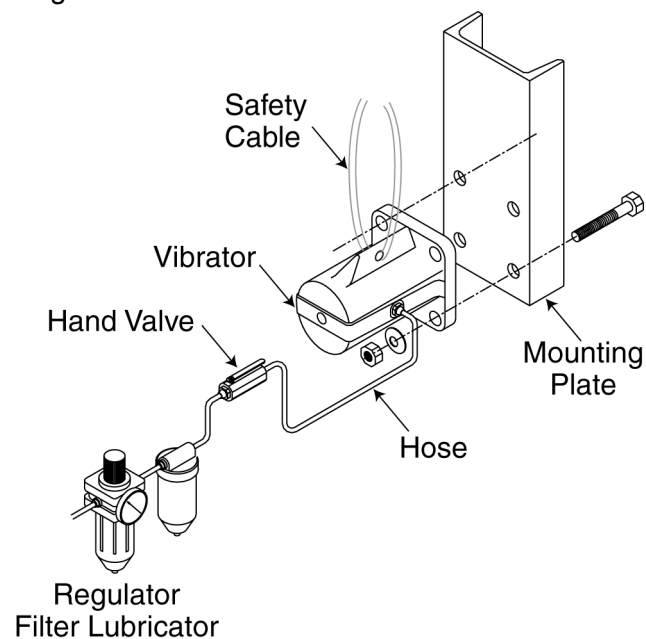


B.E.S.T. Model AP & AP-Q Pneumatic Vibrator



There are five components necessary for proper operation of B.E.S.T., Inc. Pneumatic Vibrators (See diagram below).

1. Vibrator
2. Mounting Channel
3. FRL (Filter, Regulator, Lubricator)
4. Flexible Hose with Pipe Connectors
5. A Quick-Acting Valve



VIBRATOR**B.E.S.T. Air Piston, Ball or Roller Type Vibrator**

NOTE: *Most pneumatic piston vibrators require a starting spring for proper operation, when units applied in near horizontal applications. The only function a spring serves is to push the piston into a starting position. The starting spring is not necessary in installations where the vibrator is installed at an angle of 30° or more from the horizontal.*

NOTE: *If a starting spring is needed and not included, contact the factory. Springs are not supplied as a standard factory installed component, but are available from stock on request or at time of initial order placement.*

**FRL
(LUBRO-CONTROL
UNIT)**

“AF” Automatic Filter - The automatic Air Filter is designed to remove dust, foreign particulates and excess moisture from the air stream. It is necessary to clean or replace the filter element periodically to maintain a clean air source to the vibrator.

“AL” Automatic Lubricator - The Lubricator is designed to inject an oil fog into the air stream to lubricate the Pneumatic Vibrator. B.E.S.T., Inc. recommends the use of Pneumatic Air Tool Lubricant or a similar lubricant.

Accepted oils for lubrication are:

1. Chevron Handy Oil (#15)
2. Shell Oil Tellus Oil (C-5)
3. Non-Fluid Oil Co. (Air Lube 10/NR)
4. Mobil Oil Corp. (Velocite Oil 10)
5. Cities Service Co. (Citgo Sentry 10)

Standard Oil Specification for Pneumatic Vibrators:

Viscosity 30-100 S.S.U. at 100°F, minimum aniline point of 200°F - typically used for high speed air operated equipment and air turbines.

NOTE: *The use of too heavy an oil will retard operation and reduce the vibrators frequency.*

“AR” Automatic Regulator - The frequency and force output of a Pneumatic Vibrator is controlled by varying input air pressure. Normal operating pressure is 60 psig. Complete instructions accompany the lubro-control unit. Always install the lubro-control unit within 15 ft. of the vibrator unit.

QUICK ACTING VALVE

A full orifice valve should always be used with as great a “Constant Volume” factor as possible, to prevent air volume starvation to the vibrator. The valve must be a quick acting type to assure that a burst of air is available to shift the vibrator into a running position. The valve must be installed within 10 ft. of the vibrator and preferably 3 to 5 ft. Always match the valve NPT size to that of the vibrator intake NPT size.

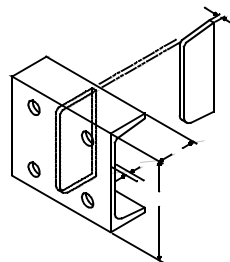
FLEXIBLE HOSE

“HL” hose lengths are available from B.E.S.T., Inc. for connection to the vibrator’s intake. Always use a flexible hose, preferably neoprene with an I.D. as large as the vibrators intake.

“MC” MOUNTING CHANNEL

It is highly recommended that a mounting channel be used to attach the air vibrator to the bin or hopper wall. The sketch below depicts the proper minimum channel construction for B.E.S.T.’s Air Piston Vibrators.

Vibrator Size	1-1/4”	2”	3”	4”
Weight/Width	6” 13#/ft.	7” 22.7#/ft.	10” 30#/ft.	10” 30#/ft.
Web	3/8”	1/2”	5/8”	5/8”
Flange	2-1/8”	3”	3”	3”
Gusset Thickness	1/2”	1/2”	1/2”	1/2”



NOTE: *If the channel is to be attached to a curved or conical surface, it may be necessary to grind a similar contour on the reinforcement rib of the channel.*

Bolts (Mounting and Rechecking)

Always use certified Grade 5, properly sized, fine thread hex head cap screws, for attaching the air vibrator to the bin wall. Matching, nylon insert type locking nuts should also be used.

NOTE: *Always recheck bolt tightness after the first few hours of operation as bolts will tend to stretch. High compression belleville type washers are ideal for taking up some of the bolt stretch and can be employed to great advantage.*

Safety Cables

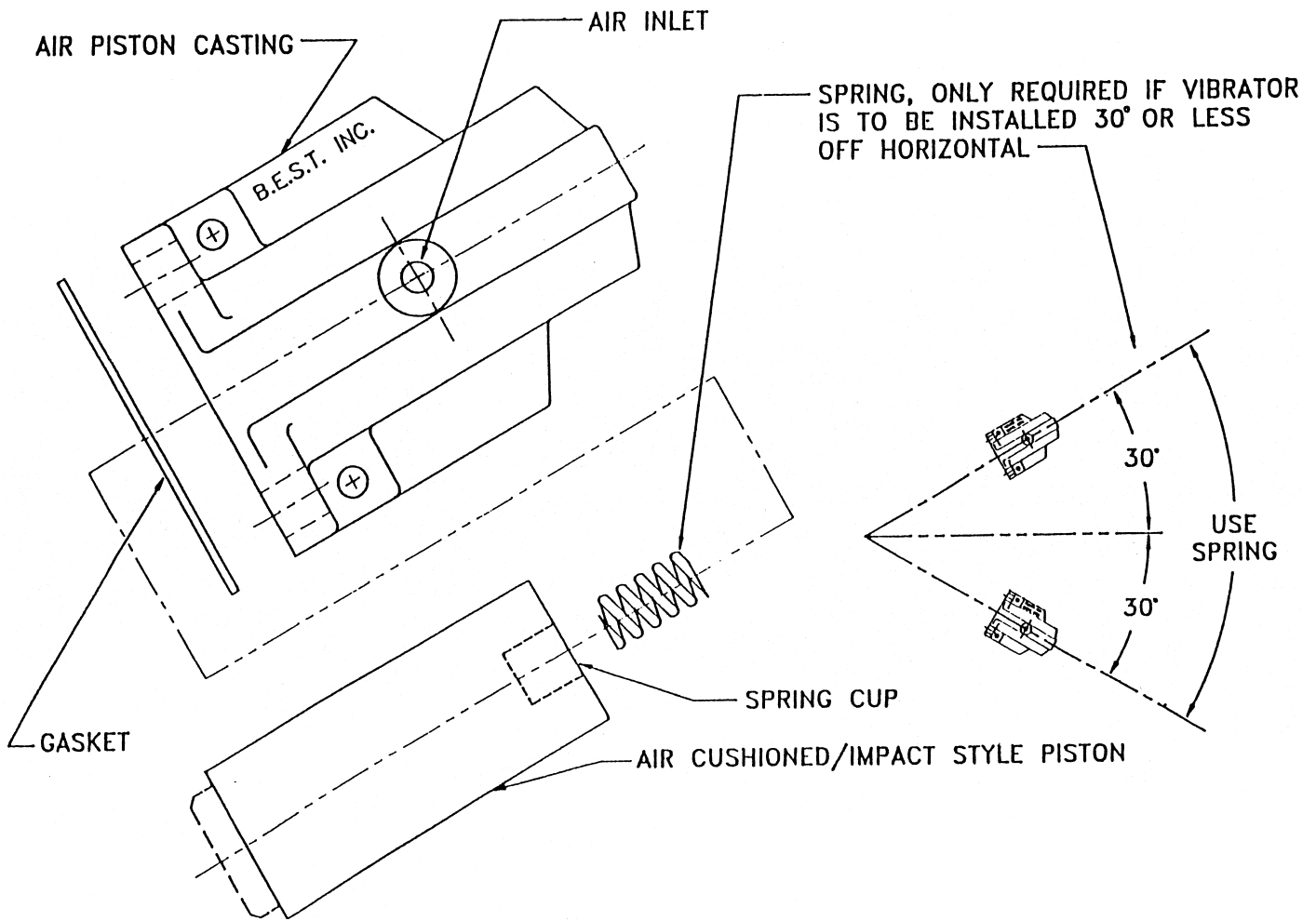
Always install a safety cable on channel and vibrator in overhead installations or where the possibility exists that the vibrator fasteners may become loose or where channel may break free of the bin wall and cause potential injury.

TROUBLESHOOTING

B.E.S.T.'s Air Powered Vibrators are thoroughly factory tested prior to shipment and are checked for quality and workmanship. If, however, the vibrator fails to start, check the following items:

1. Air source connected to exhaust port of vibrator
2. Dirt or grit present in the vibrator at time of installation
3. Lack of lubrication or too heavy an oil
4. Lack of proper air volume or pressure
5. Valve installed backwards or is not a quick acting design

If, after checking all of these items, the vibrator still will not operate, contact our local representative or our Factory Service Department.



Vibrator Assembly Drawing