

# HCP 4 SGO

Hopper Car Portable Vibrator



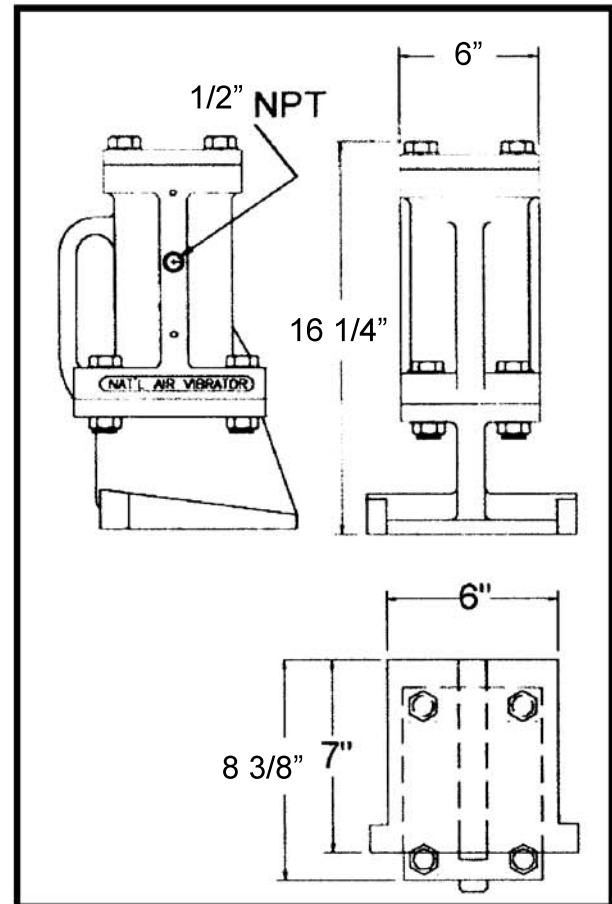
## OPERATING CHARACTERISTICS

FREQUENCY	1400 VPM
AIR CONSUMPTION	18.2 S.C.F.M @ 50 psi
WEIGHT	115 lbs.

The NAVCO HCP 4.00 SGO pneumatic piston vibrator is designed to provide reliable and effective performance in difficult applications and severe environments. The size and operating characteristics of the HCP 4.00 SGO make it ideal for solving **Heavy-Duty** railcar unloading problems.

### Operation and Construction

The HCP 4.00 SGO vibrator incorporates a nominal 4" piston and bore. The vibrator housing is manufactured from a one piece, ductile iron casting. During operation, compressed air is alternately directed from one end of the piston to the other through a series of internal ports. The piston is the only moving part, which makes the HCP 4.00 SGO vibrator a reliable, low maintenance device.



All internal surfaces are coated with Teflon, to enhance the durability and reliability of NAVCO HCP 4.00 SGO vibrators.

The HCP 4.00 SGO mounting head (B-271) is universal and fits all dove-tail brackets common on hopper cars. Manufactured with tabs on both sides, the mounting head provides a loose fit in the bracket.

The loose fit, "free-ride" design is a unique NAVCO feature offering the following advantages:

- The High amplitude, low frequency action of the HCP 4.00 SGO piston moves the total mass of the vibrator back & forth in the dove-tail bracket. This is the most effective and efficient means to transmit vibration energy through the railcar hopper to the bulk material.

**NAVCO**<sup>®</sup>  
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- Many railcar manufacturers recommend only high amplitude, low frequency vibrators to minimize stress fatigue and railcar maintenance costs.
- The "free-ride" design allows for easy installation and removal of the NAVCO hopper car vibrators.

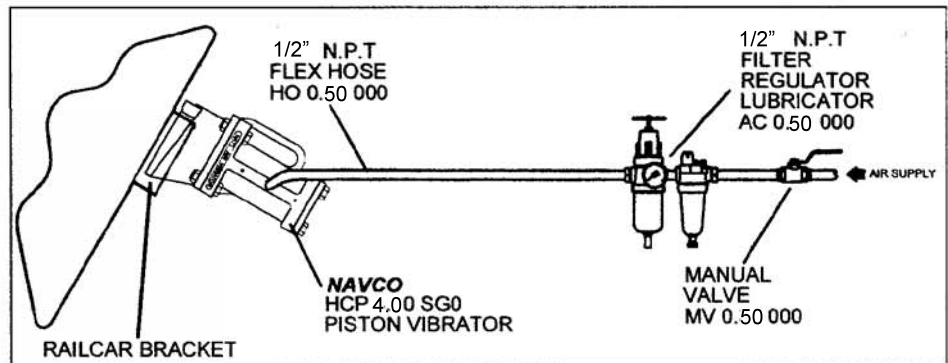
### Application

NAVCO HCP 4.00 SGO pneumatic piston vibrators are excellent for all bulk material flow problems from railcars, especially those involving cohesive materials with marginal to poor flow characteristics. They are also effective in cleaning material adhering to railcar hopper walls.

The HCP 4.00 SGO allows for fast, efficient unloading of cement, fertilizers, soybean meal, feeds, sugar, salt cake, clays, lime, soda ash, or other materials -freeing personnel for other duties and reducing "carry back". Additionally, the HCP 4.00 SGO eliminates hazardous scraping of interior walls from on top of the railcar.

### Model Types

The standard NAVCO HCP 4.00 SGO is offered as a silent model. The silent model operates at a frequency and amplitude to optimize the advantages of the "free-ride" design.



### Installation

The HCP 4.00 SGO is designed to fit loosely in hopper car brackets. The unit should be allowed to move freely in the bracket.



Care should be taken to keep supply air lines free from contaminants as hopper car vibrators are continuously installed and removed from railcars. Recommended operating pressure is 20 to 60 p.s.i. (at the vibrator). A well-designed air supply line system is also recommended to allow filtered and lubricated air to reach the vibrator, thus increasing vibrator life.

Automatic on / off cycling is recommended to optimize the unloading process. Other benefits of cycling include extended vibrator life, reduced utility costs, and lower average noise levels.

### Accessories

NAVCO offers all air line accessories for complete installation of HCP 4.00 SGO vibrators.

### HCP Lift Carts

NAVCO has developed two sturdy lift carts for all HCP models. The unique cart designs allow for easy installation and removal of HCP's from the dovetail brackets.

### Manual Cart

The Manual HCP Cart is constructed of tubular steel with pneumatic tires that roll easily over obstructions.



### Auto Cart

The Auto HCP Cart is pneumatically powered and the handle is ergonomically located allowing use as a 2 wheel or 4 wheel cart. The vibrator is attached to the cart's air supply and is easily operated from the handlebar controls.



The HCP Cart has several advantages over manual installation and removal of HCP's:

- Simple lever design makes installation and removal of even the heaviest HCP's easy.
- Eliminates back strain from manual installation and removal.
- Prevents dirt and other contaminants from entering the exhaust ports.

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