

Sectional Mounting Systems (SMS)



DADCO gas springs are linked to a modular control panel and mounted to an SMS plate. The SMS is secured to the die from the bottom.

- Cost effective.
- Shipped ready to install.
- Fastest delivery available.
- Longest life gas springs available.
- Factory pre-tested leak free operation.
- Factory mounted systems, piped with control panel or self-contained operation.
- Lighter than a comparable manifold, for easier handling and storage.

Ordering Information:

DADCO Sectional Mounting Systems are constructed to individual customer specifications, tested, and shipped ready to install. When ordering an SMS, please provide a drawing with the following information:

Finished Plate Dimensions

- Plate thickness (include extra grind stock)
- Width
- Length

Tonnage (Force) Requirements

- Gas spring quantity
- Model number
- Stroke length
- Gas spring mounting option
- Location and orientation of gas spring on the plate

Control Panel Requirements

- Location of junction blocks and control panels
- Connecting hose length
- Routing of hose from gas springs to panels and possible areas where routing might be obstructed

Plate Mounting Holes

- Quantity
- Location
- Size
- Depth of counterbore or mounting bolt standard

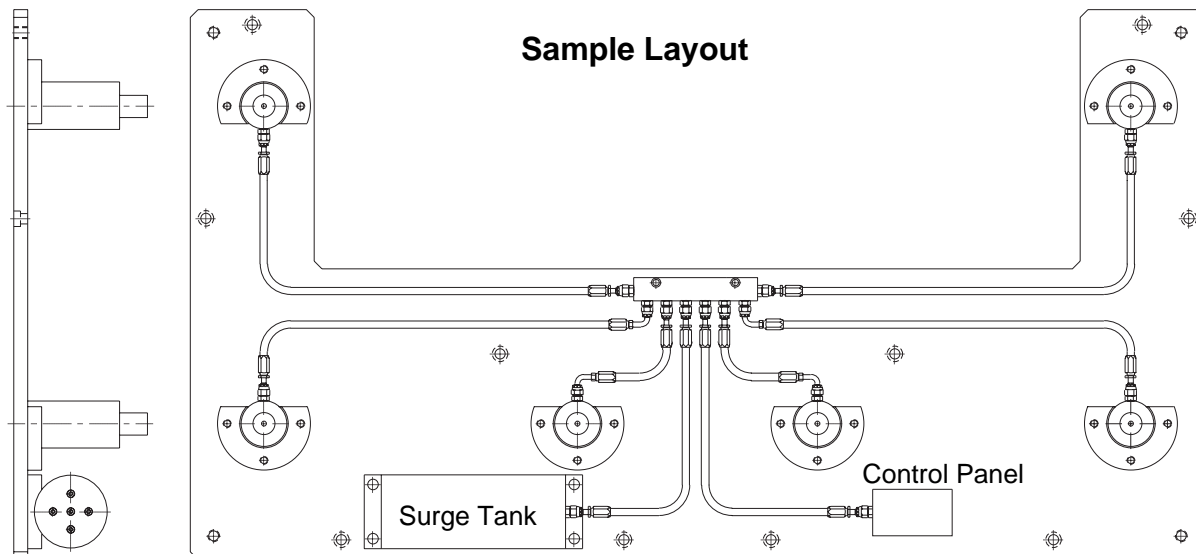
Plate Handling Holes

- Location (Typically one handling hole is located in each corner of a rectangular plate.)
- Thread size

Hose Requirements

- Standard or high pressure

Refer to the NH/95 Catalog for information on DADCO control panels, junction blocks and hose.

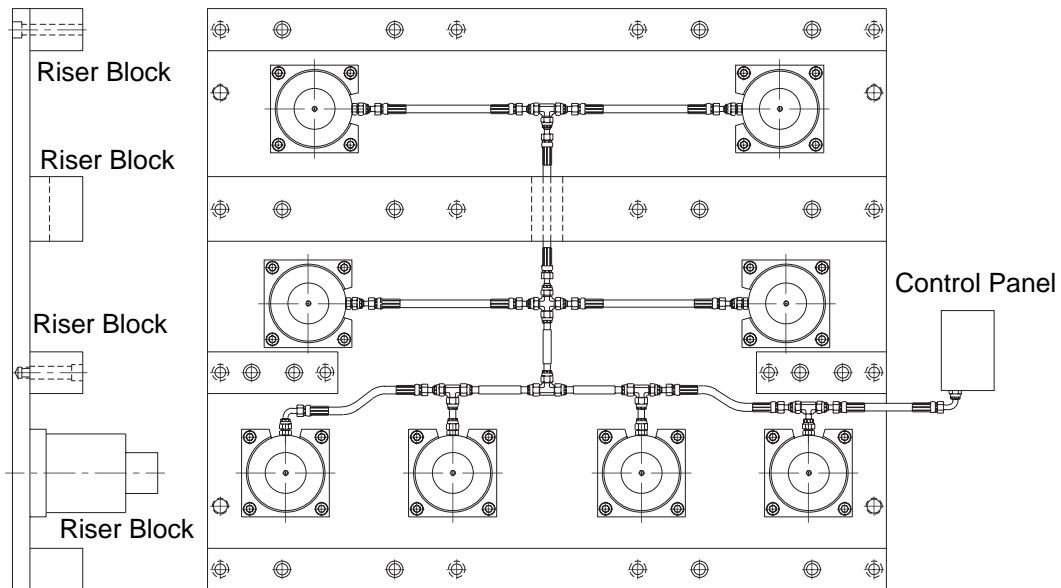


Note: For information on surge tanks, consult Bulletin No. 94B110 or contact engineering.

SMS Design Options:

SMS with Riser Blocks

- Adding riser blocks to the SMS is an option when height is a concern. By adjusting the height of the riser block, the plate thickness increases to provide the correct mounting height. Instead of mounting the SMS plate to the parallel, the riser block is attached to the parallel.
- In addition to the information provided on the sketch, when ordering please specify: finish height and location of blocks, size and quantity of holes required to mount blocks to plate, and groove location(s) (if required) for hose to pass through the block.

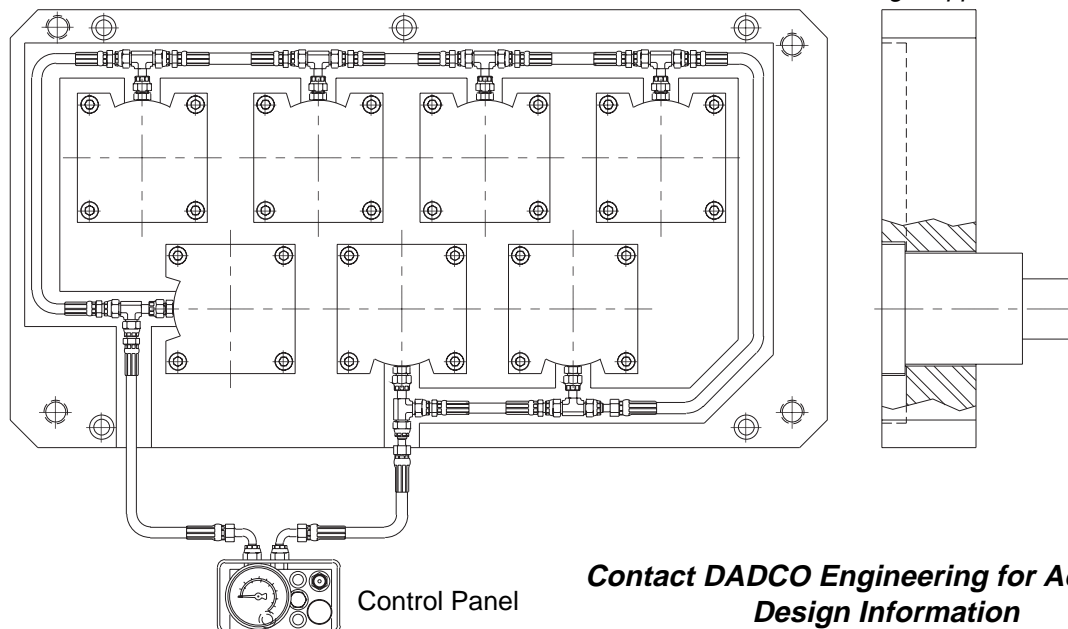


SMS Mounted from Bottom

- Mounting the cylinders from the bottom is another option when height is restricted. By mounting cylinders from the bottom, the shut height is reduced.
- In addition to the information provided on the sketch, when ordering please specify the location of the control panel.



DADCO gas springs are mounted to the SMS from the bottom, for restricted shut height applications.

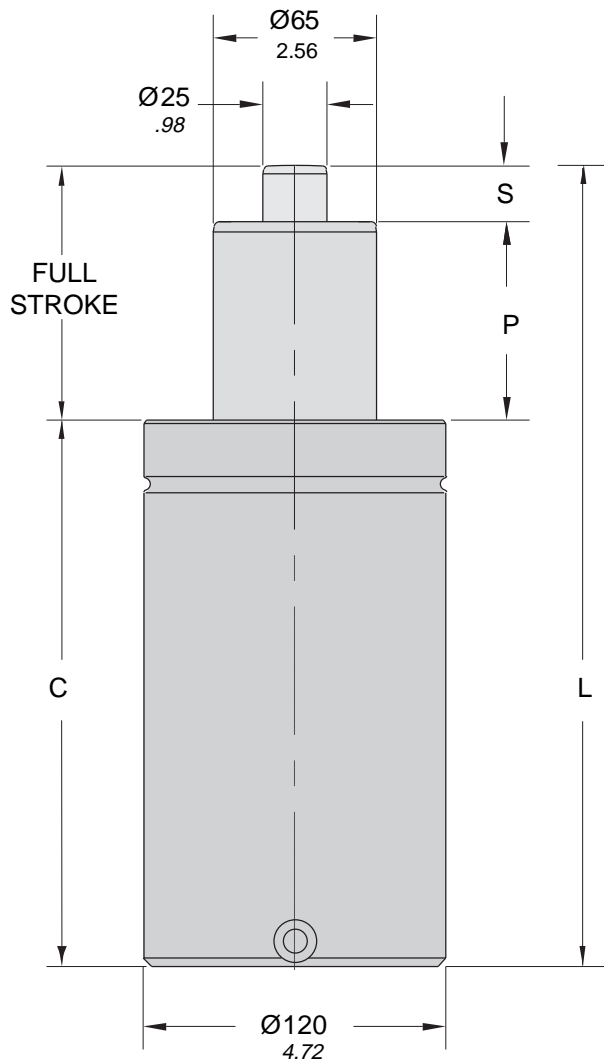


Contact DADCO Engineering for Additional Design Information

TANDEM™ Nitrogen Gas Springs



- Initial force sufficient to balance the binder ring in inverted stretch draw dies.
- Significantly reduces potential press damage caused by impact spike.
- Release force greatly reduced on return stroke.
- Lower pressure increase than standard gas spring.
- Envelope dimensions match standard NH Series gas spring for easy interchangeability.

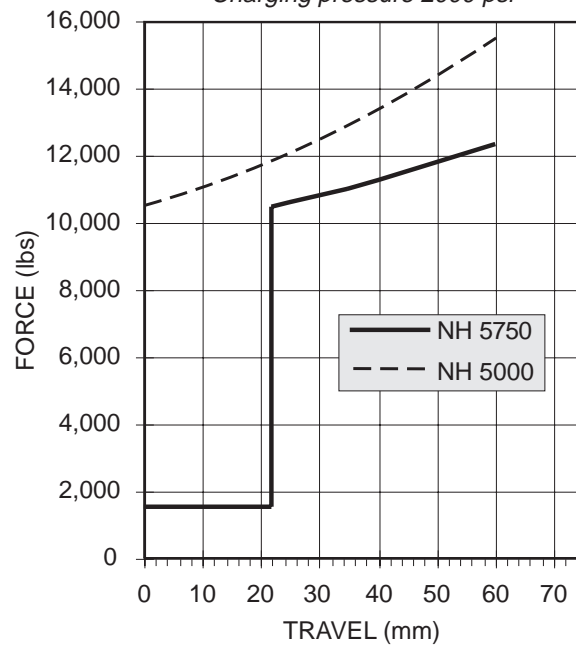


TO Model Shown

See NH / 95 Series Catalog for a full description of mounting options.

Tandem Force Example NH-5750-P53-S22

Charging pressure 2000 psi



Part No. Model-primary-secondary stroke stroke	Full Stroke mm in	C mm in	L mm in
NH 5750-P53-S22	75 2.95	215 8.46	290 11.42
NH 5750-P78-S22	100 3.94	240 9.45	340 13.39
NH 5750-P103-S22	125 4.92	265 10.43	390 15.35
NH 5750-P128-S22	150 5.91	290 11.42	440 17.32

Ordering Example:

NH 5750 - P53 - S22 - TO - C - 2000

Model _____
 Primary Stroke _____
 Secondary Stroke _____

Note: Other size models are available. Contact DADCO engineering.

Charging Pressure

Max = 150 bar or 2175 psi

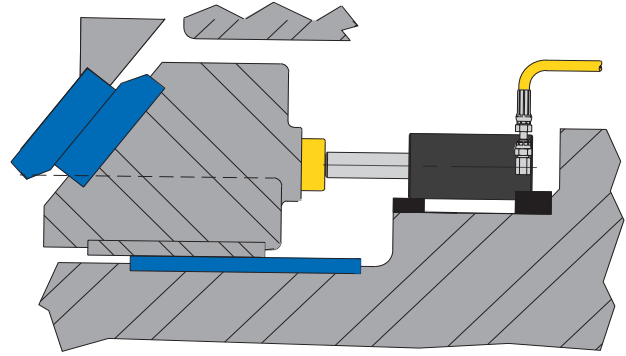
Operating Sys.

C=Self-Cont. P=Poppet F=Open Flow

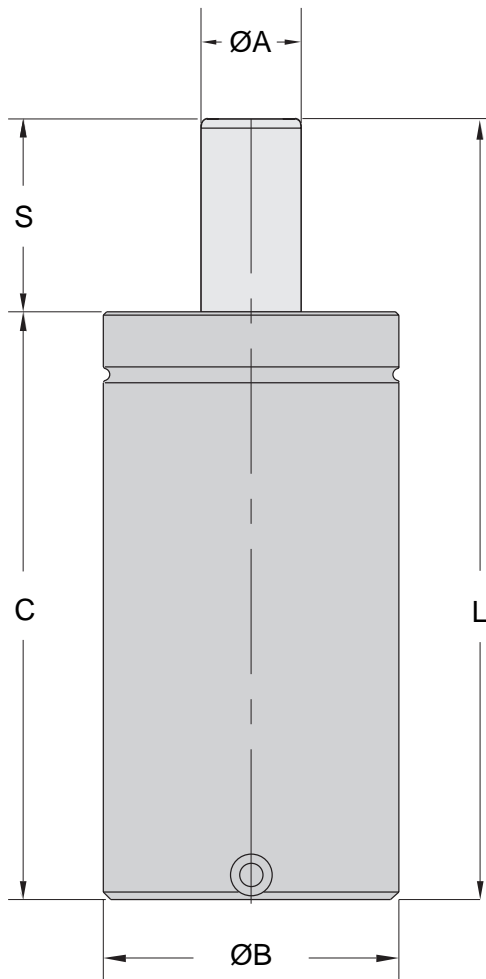
Mount Option

Low-Rise Nitrogen Gas Springs

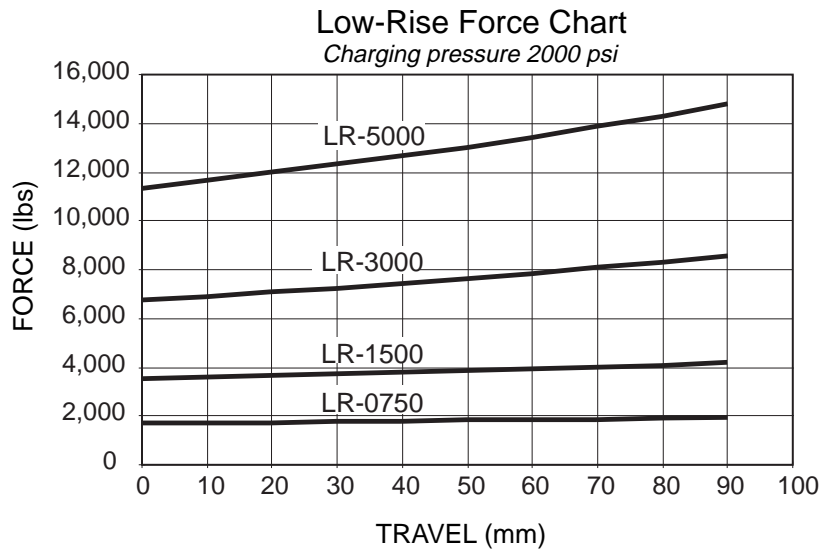
- Built with standard components to easily retrofit existing models.
- Provides the same force on contact as standard model gas spring with a significantly lower pressure increase.
- Ideal for cam slide return.



DADCO's Low-Rise Nitrogen Gas Spring used in a cam slide return--to provide a lower pressure increase compared to a standard gas spring.



TO Model Shown
See NH / 95 Series Catalog for a full description of mounting options.



Model	C mm in	L	ØA mm in	ØB mm in
LR 0750	95 + S 3.74 + S	C + S	25 .98	75 2.95
LR 1500	100 + S 4.00 + S	C + S	36 1.42	95 3.74
LR 3000	100 + S 4.00 + S	C + S	50 1.97	120 4.72
LR 5000	100 + S 4.00 + S	C + S	65 2.56	150 5.91

- Standard stroke lengths 13 to 200 mm (.5 to 8" in .5 increments)
- If lower pressure increases are required, please consult DADCO engineering.

Ordering Example:

LR - 1500 x 50 - TO - C - 1600

Model _____

Stroke _____

Mount Option _____

Charging Pressure

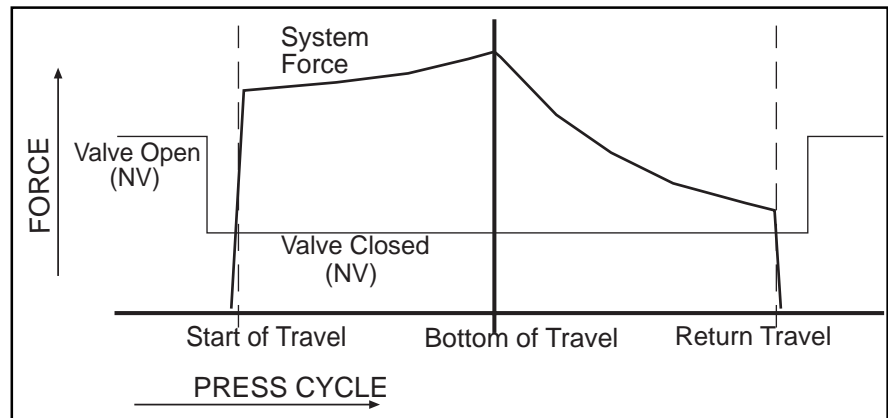
Max = 150 bar or 2175 psi

Operating System

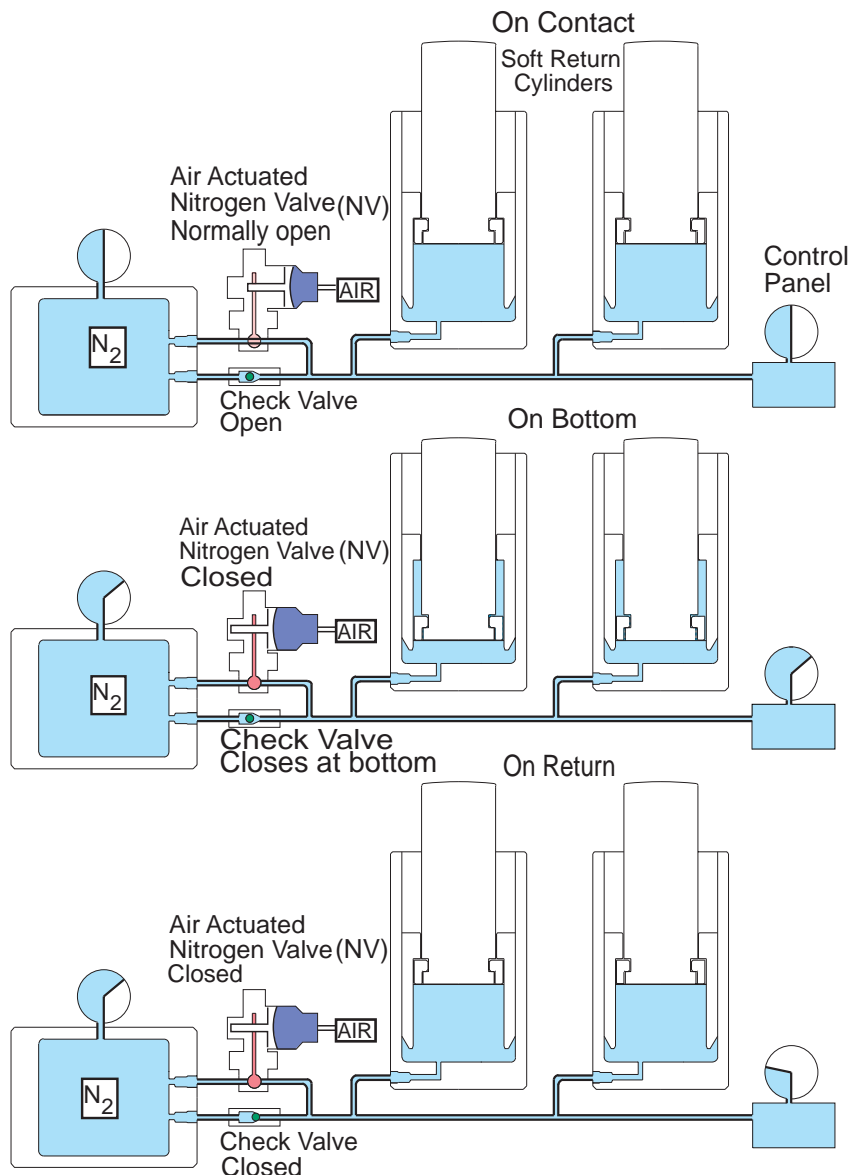
C=Self-Cont. P=Poppet F=Open Flow

Soft Return™ System

DADCO **Soft Return™** Systems help to significantly reduce potential press, die, and part damage caused by excessive return force. The **Soft Return™** System allows for a force reduction on the return stroke, while still providing the force on contact needed to form the part. When used with DADCO **Soft Return™** Cylinders, the **Soft Return™** System allows for up to a 50% reduction in return force.



Typical Force Curve



Start of Travel

- Before contact, the air actuated nitrogen valve is opened, allowing the system pressure to equalize. On the down stroke, volume in the system is reduced causing an increase in cylinder and surge tank pressure.

Bottom of Travel

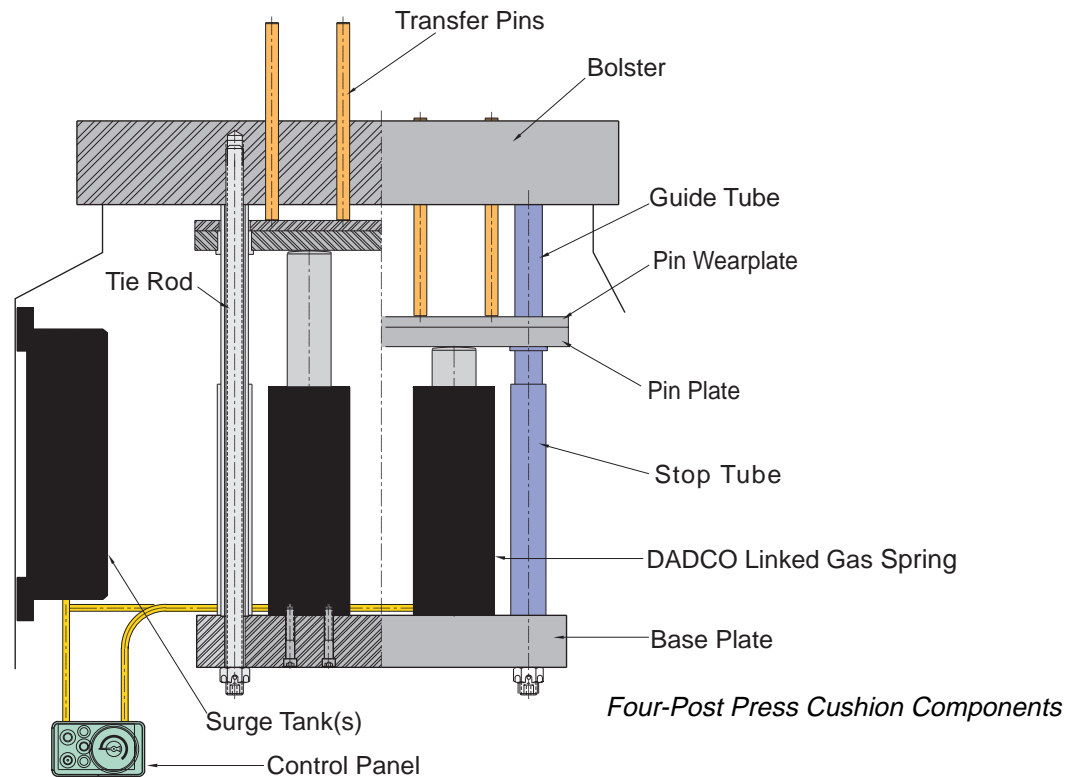
- The air actuated nitrogen valve is closed during the down stroke to prevent back flow from the surge tank(s). At the bottom of travel, the check valve closes isolating gas in the surge tank(s).

Return Travel

- On the gas springs return stroke, the compressed gas in the surge tank(s) remains isolated from the spring, resulting in a lower system pressure.

Contact DADCO Engineering for Additional Design Information

Nitrogen Gas Press Cushions



- DADCO Nitrogen Gas Press Cushions are a cost effective and more compact alternative to traditional air cushions.
- Press Cushions are a self-contained system, resulting in lower maintenance and a more easily controlled force.
- By offering consistent pressure, DADCO Press Cushions are a system of nitrogen gas springs that transfer constant force onto the pin plate, which is guided to assure proper travel without binding.
- Bolster mounted, available in multiple or single post stud design, in many styles and forces.
- Press Cushions with DADCO Nitrogen Gas Springs can provide much greater force in a smaller area than an air cushion with air cylinders.
- Custom Press Cushion assemblies are also available, built to any specifications.
- DADCO Nitrogen Gas Press Cushions can easily retrofit existing press cushion (air or nitrogen).

When ordering a DADCO Nitrogen Gas Press Cushion, please give the following information:

As a replacement--

- size of current air or nitrogen cushion (number, size, and stroke of cylinders)
- operating pressure
- detailed drawing of cushion in place

For new design--

- force required
- stroke required
- force increase allowed
- size of bed area
- attachment method and location
- detailed drawing(s) of press bed area
- location of control panel

Contact DADCO Engineering for Additional Design Information

Catalog No. 96C114

For operating specifications and additional technical data on gas spring products in this catalog, please refer to the NH & 95 Series catalog.

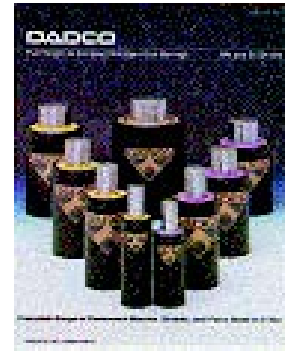
Other DADCO Products Available:



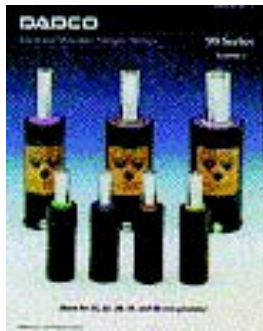
Micro Series
3/4" and 1" diameter
From 10 to 450 lbs of force



L Series
Mini Nitrogen Gas Springs
1/3, 1/2, 3/4 ton models



NH & 95 Series
High-tonnage Nitrogen Gas Springs
Up to 8 tons of force



90 Series Vol. I
International Miniature and
Micro Gas Springs



90 Series Vol. II
International High-tonnage
Gas Springs-attachable mounts



HP Series
Metric Air Cylinders
32-250 mm Bore



DK Series
Hydraulic Core Pin Cylinders
Metric sizes

DADCO Nitrogen Gas Springs are manufactured under U.S. patents: 4,792,128; 4,838,527; 5,303,906 and others.

43850 Plymouth Oaks Blvd. • Plymouth, MI 48170 • USA
Phone: (313) 207-1100 • (800) 323-2687 • Fax: (313) 207-2222
Toll Free: 1-800-DADCO-USA