

Gas Spring Safety Requirements

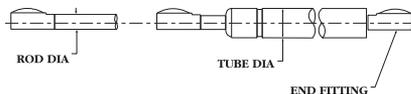
Please read carefully before installing. Failure to do so could invalidate your warranty.

Gas Springs are filled with nitrogen at very high pressures and under no circumstances should they be opened or tampered with, or subjected to excessive heat or tension.

Gas Springs should always be treated with respect to the inherent properties associated with any pressurized product.

The nature of a gas spring is to lose pressure over a long period of time. It is highly advisable to periodically check its ability to operate as initially intended, and to include this check as part of a planned maintenance program. Immediately replace the gas spring if, and when necessary.

For optimum performance, we advise the use of ball



socket connections to alleviate possible side load. Always ensure end fittings are fully screwed onto the gas spring thread ends before installation. Mount with the piston rod in the down position, preferably within 60 degrees to vertical, and avoid the spring traveling through a large arc. It is advisable to keep the spring in a single plane of movement. Failure to adhere to this advice may result in reduced life of the gas spring.

Please contact Guden for more information or advice.

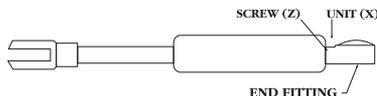
SetForce Valve Adjustment Instructions

Fit the gas spring with the cylinder or tube uppermost. The SetForce valve will be seen at the top of the cylinder (X).

Adjustment of the screw

Ensure the 2mm allen key (provided) is located in the screw (Z) to its maximum depth. Undo the screw carefully by rotating counter-clockwise until gas is heard escaping. When re-tightening, care should be taken to ensure that excessive force is not applied, as this will damage the hexagon in the screw and make it inoperative.

Repeat the process releasing a small amount of gas at a time until the required spring action is acquired. It is advisable to add approximately 10% to the weight being supported when adjusting the gas spring. This



will reduce the chance of releasing too much gas. If the application is using two SetForce springs, care should be taken to release pressure at as close to an equal rate as possible in both springs to avoid buckling, or over stressing of the cover. **Under no circumstances should the screw be removed.**

NOTE: A slight mist of oil may sometime be seen escaping when venting gas. This is normal. To minimize the amount of oil released, always keep the tube above the rod when releasing pressure.

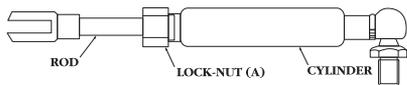
FrictionStop Adjustment Instructions

When initially fitting the gas spring, position with the rod down wherever possible.

To adjust a gas spring's degree of hold and ability to stay in various positions, it is necessary to adjust lock nut (A) as shown on spring tube.

Turn clockwise to increase hold, turn counter-clockwise to decrease hold. Progressively adjust the lock-nut by small increments until the required gas spring action is achieved.

NOTE: Under no circumstances should excessive force



be applied to the lock nut. Only a small amount of movement is required to adjust the friction level. Over tightening may result in irreparable damage.

For FrictionStop fitted with a SetForce valve feature, release the friction locking nut prior to releasing any gas. This will prevent releasing too much gas due to increased friction from the lock-nut device.

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H.A. Guden Co., Inc.
99 Raynor Avenue
Ronkonkoma, NY 11779-6634
800-3-HINGES • 631-737-2900 • Fax: 631-737-2933
www.guden.com • info@guden.com

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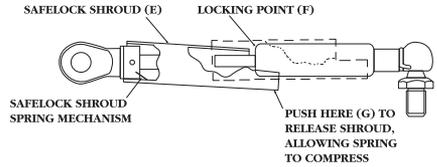
SafeLock Operating Instructions

Warning: If SafeLock is STUD ended it will have a retaining nut on the shroud end for transportation only. This nut **MUST** be removed before applying an end fitting or installing into the application.

Warning: To insure correct operation of the Safelock safety shroud, the end-fitting and boss **MUST** be fully tightened on to the rod. To do this, push the shroud fully on to the rod and tighten the end fitting on the boss.

SafeLock Gas Springs eliminate the need for separate safety rods in critical lift assist applications. They lock in place when fully extended, protecting the operator from potential injury in the unlikely event of gas spring failure through overload or misuse.

The SafeLock feature occurs automatically when the gas spring is fully extended by a spring loaded locking shroud (E), moving into place (F), thereby preventing the gas spring from compressing.



The SafeLock shroud is manually released by applying thumb pressure to the designated area of the locking shroud (G), allowing the gas spring to compress in a controlled manner.

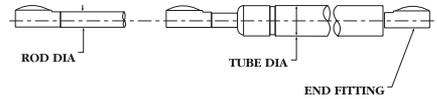
The Safelock feature is not to be substituted for, or cause the elimination of a planned maintenance program. Gas springs must still be checked for performance, and the Safelock should not be used when the gas spring fails to operate on its own.

Dampers Operating Instructions

Compression dampers operate best in the shaft (rod) up position so that the internal piston remains in the oil. The lid or door should be closed before full compression is reached.

Extension dampers operate best in the shaft (rod) down position to effectively slow the motion when extending. It is recommended to have an outside positive stop for the lid or door in addition to the damper.

Dampers should never be forced to extend or compress with any additional pressure other than the



weight of the lid or door they are being used on. Dampers operating only in a horizontal plane should be custom made as "non-cavitating" to insure that damping is effective.

Self-Centering Dampers Operating Instructions

Self-Centering Dampers are supplied with a threaded ball joint already fitted on each end. Because of their unique construction, Self-Centering Dampers can be mounted in any position, any orientation, and still provide a smooth, controlled and consistent return to neutral.

