

# Nye<sup>®</sup> SmartDispensing<sup>™</sup>

When setting up a pump and dispensing system for grease, it's important to remember that grease does not behave like water. Grease is made up of an oil and a solid thickener. Pressure can force the oil to be squeezed out of the grease compound. As in any situation where materials are under pressure, too much pressure can result in equipment ruptures or even minor explosions. To avoid pressure hazards, keep three general guidelines in mind:

1. Keep pump pressure as low as possible. Excess pressure promotes oil separation and pump malfunction.
2. Keep plumbing to a minimum. The more plumbing, the greater the pressure needed to push grease through the system.
3. Release pressure from the system during production downtime.

*The following SmartDispensing tips are practical considerations based on these guidelines. For further help, please call Nye or your dispensing supplier.*

## Selecting the size of a grease container

Selecting a container that holds a 30 day supply of grease reduces oil separation in the container, which may create the need to purge the plumbing.

## Changing a grease pail or drum

■ Minimize contamination. When changing between chemically different grease (e.g., changing from petroleum to silicone), thoroughly clean the old grease from the entire dispensing system with the proper solvent before introducing the new grease.

■ Before lowering the follower plate onto the new grease, use the Nye SmartSqueegee<sup>™</sup> or a similar tool to prepare the grease for more efficient air purging. For soft grease (grade 0 or 1) create a concave ("bowl-shape") cavity in the grease's surface. In a stiff grease (grade 2 or 3) make a convex mound on the surface. Avoid stirring the grease; stirring can introduce air pockets.

■ If oil has "puddled" on the grease surface, use the SmartSqueegee to gently work the oil back into the grease before lowering the follower plate. Again, avoid stirring.

## Installing plumbing and hoses

■ Reduce the overall pressure in the system as much as possible. Excessive pressure can cause oil separation, equipment damage, or a burst in the system.

*(continued)*



**Get your own SmartSqueegee!**  
**Call your Nye Representative**  
**or log on to**  
**[SmartGrease.com/squeegee](http://SmartGrease.com/squeegee)**



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- Put the pump as close to the dispensing station(s) as possible. Less plumbing length reduces the pressure required to pump the grease.
- Avoid Elbow and Tee fittings, they impede grease flow and require additional pressure to pump the grease. For optimal grease flow, use flexible hosing with gradual bends.
- Use large diameter plumbing to reduce the pressure needed to pump the grease.
- If a single pump feeds multiple dispensing stations, balance the plumbing. The distance from the pump to each “drop” should be relatively equal. Balanced plumbing reduces the total pressure needed to service the plumbing system and promotes consistent dispensing at each drop.
- Pay attention to pump ratios. Excessive system pressure can be caused by improperly calculating the output pressure of the pump. For example, a pump with a 20:1 ratio means the amount of pressure applied to a grease is 20 times greater than the air intake of the pump. Adding a pressure gauge on the output side of the pump can eliminate the need to compute actual pressure. In general, use the lowest pump ratio possible.
- Note that pump ratios are an average taken between the up and down strokes of the pump piston. Actual pressure will spike higher than the listed ratio.

## **Bleeding air and grease from the bleeder plug**

- Prevent waste and mess from accumulating on top of the follower plate. Add a length of hose, with a shut-off valve, to the follower plate’s air-bleed valve. Grease expelled through the air-bleed valve can then be collected in a clean container for reuse.

## **When equipment is not in use**

- When not in use, relieve pressure in the dispensing system, both container and plumbing. This should help reduce oil separation in the grease while production is idle. A pressure relief valve should be installed.



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