



Tried and tested

Tested in the lab and in the field, LifeGuard's protective capabilities and parameters are:

Burst containment

- LG3K – up to 6,000 psi (414 bar)
- LG4K – up to 8,000 psi (552 bar)
- LG5K – up to 10,000 psi (689 bar)

Pinhole leak control

- LG3K – up to 3,000 psi (207 bar) at 212°F (100°C) for up to five minutes
- LG4K – up to 4,000 psi (276 bar) at 250°F (121°C) for up to five minutes
- LG5K – up to 5,000 psi (345 bar) at 250°F (121°C) for up to five minutes

- Handles all hydraulic fluids and biodiesel fuel
- Allows fluid to safely escape down the length of the assembly
- Creates noticeable spill for hose failure detection
- Correlates to ISO 3457 and meets MSHA's flame-resistance requirements
- No other sleeve provides this level of protection
- Patent pending system includes Gates hose, couplings, sleeve and channel clamps

GATES HAVE LEAK PROTECTION UP THEIR SLEEVE

A PINHOLE LEAK IN A HYDRAULIC HOSE UNDER PRESSURE CAN RELEASE TOXIC FLUID AT MORE THAN 200FT PER SECOND. NO PROTECTIVE CLOTHING SHORT OF A SUIT OF ARMOUR IS GOING TO PROTECT SOMEONE AGAINST THAT. YET INDUSTRY STANDARDS – AND BEST PRACTICE – MAKE PROTECTING YOUR OPERATORS IMPERATIVE. SO GATES HAVE THOUGHT LATERALLY, AND DEvised A COST-EFFECTIVE, NON-METALLIC 'SUIT OF ARMOUR' FOR THE HOSE INSTEAD OF THE OPERATOR.

Industry standard ISO 3457 requires protection for operators within a one meter line-of-sight of any hose conveying fluid above 50 bar (+49°C). That's because a burst – or even just a pinhole leak – in a hydraulic system can cause injury, fluid burns and injection. Not to mention fires and explosions, electric shock and mechanical failure.

Any of those can be devastating to the operator, who clearly needs protection. But they can also be devastating to a business. Research in the USA has calculated that a single catastrophic hose failure accident can cost a business around £90,000 in direct medical expenses, loss of production, legal expenses, fines and more. Operating on a 3% profit margin, that kind of sum would need additional sales of nearly £3,000,000 to recoup the loss.

All of which makes protection not just best practice and an obligation to your employees, but a sound investment too.

Call the LifeGuard

Gates LifeGuard line-of-sight sleeving system is the first sleeving system specifically designed to protect operators, equipment and the working environment from the dangers of catastrophic hose failure.

Until now, protecting the operator (cumbersome and not 100% effective), metal shielding (costly), or re-routing the hose lines (not always practical or desired) were the only ways to avoid the hazards. But now the unique, patent pending LifeGuard offers an effective, economical alternative that provides all the protection your operators need, and without affecting their or the system's performance.

Leaking secrets

The secret of LifeGuard's unparalleled leak and burst protection is in the unique LifeGuard sleeve – made up of multiple layers of super-strong nylon material. The layers are not joined to each other, but can

slide and move independently to control hydraulic failures.

The specially designed and engineered inner layer is manufactured from tightly-woven filament nylon. This is where LifeGuard's strength lies, enabling it to control the sudden pressure release which accompanies hydraulic bursts and pinhole leaks.

The outer layer is a textured nylon material that helps to contain any escaped fluids and direct them to the ends of the hose for release. In addition, the outer sleeve resists abrasion and other external hazards which could weaken it.

But it's not only the hose which makes LifeGuard so effective. It's also the unique channel clamp.

Clamping down on danger

The LifeGuard channel clamp has been designed specifically for the LifeGuard

sleeving system. And as well as fastening the sleeve securely at each end of the hose, it provides a safe channel along which leaked fluid can escape, and acts as a leakage warning device.

The sleeve material contains the fluids, which then leave the system safely through openings created by the channel clamps at either end of the hose. This creates pools of leaked fluid beneath the clamps, to act as positive verification of a hose failure.

How safe is safe?

LifeGuard sleeving meets a variety of industry standards, including ISO 3457, and the MSHA's fire-resistance requirements.

ISO 3457 requires operator protection within a 1 metre line-of-sight of any hose conveying fluid above 50 bar at +49°C. LifeGuard provides the necessary

protection, and more – containing bursts up to 10,000psi, and pinhole leaks up to 5,000psi, at 100°C for up to five minutes.

Save time, save problems

The LifeGuard system not only saves your operators from injury, your processes from downtime and your business from unnecessary costs. It can also save you time on hose installation.

Gates offers special LifeGuard channel clamp die sets, and a LifeGuard Guide Table and Hose Bullet Set, for measuring, cutting and installing sleeving. So fabrication and assembly is quick and easy. So easy, in fact, you hardly need to roll up your sleeves to get on with it.

