

# Why Verderflex hoses outlast competitor hoses?

Why do some hose pumps have short hose life and what unique features does Verderflex have that offer extended hose life beyond that of our competitors?

Hoses fail for one main reason: fatigue. "Although there can be many reasons for a hose to failure, fatigue is one of the main seasons. Speed, discharge pressure and temperature are all influencing factors that increase hose fatigue." Elaine van der Westhuizen at Verder Pumps explained. After 8-12 million cycles, the hose fails to return to round after compression. This is evidenced first by a reduction in flow, then physical deterioration of the hose.

Verderflex' Dura pump series has several design features that provide longer hose life than our competitors. The first and most important of which is that the Verderflex hose construction. Verderflex' manufacturing process allows 3x more nylon reinforcing fibers into the hose. Hoses have to be compressed with hundreds and sometimes thousands of pounds of force. The force is absorbed into the hose's reinforcing fibers, therefore since the Verderflex hose have more fibers, it can spread that load out over a greater number of elements, thus reducing the stress per fiber and extending fatigue life. It's remarkably simple, but Verder Pumps is the only ones who do it. Some manufactures machine the OD of their hoses but unfortunately their manufacturing process leaves the OD variable. Verderflex hoses are handmade to the correct tolerances and do not require any machining.

Verderflex hoses are made with 100% EPDM as oppose to some manufacturers using a thin EPDM liner bonded to natural rubber. The advantages higher quality EPDM hoses is a higher temperature resistance and no liner weak point, as there is no liner in the hose bonding between the dissimilar rubbers. This also leads to longer hose life.

In addition to the best hose available, the Dura pump incorporates an air-gap design, unique to Verderflex. Whereas



traditional-style hose pumps flange-mount their gearboxes to the pump housing, Verder use a torque arm connection so that there exists a physical separation between the pump and drive. This way, all the heat that builds up in the drive does not conduct into the pump housing the way it can on traditional hose pumps.

The Dura pump hose is a little different than the traditional VF pump series hose. The wall is about 25% thinner. This means less compression force to occlude the hose. Less compression force = less stress = longer fatigue life. It gave up a little discharge pressure capability, but can still hit 175 psi continuous.

Two more quick points: The Dura pump rotor profile provides a more gradual compression of the hose lessening the effects of fatigue, and lastly the Dura hose is about 30% shorter than VF-series, so there is less stretching and elongation which can lead to wear and fatigue

"Superior Verderflex hoses are available for many competing pumps," van der Westhuizen concludes.

**Contact Elaine van der Westhuizen, Verder Liquids,  
Tel:+27 (0) 11 704-7500, [www.verderliquids.com](http://www.verderliquids.com),  
[elaine.vanderwesthuizen@verder.co.za](mailto:elaine.vanderwesthuizen@verder.co.za)**

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