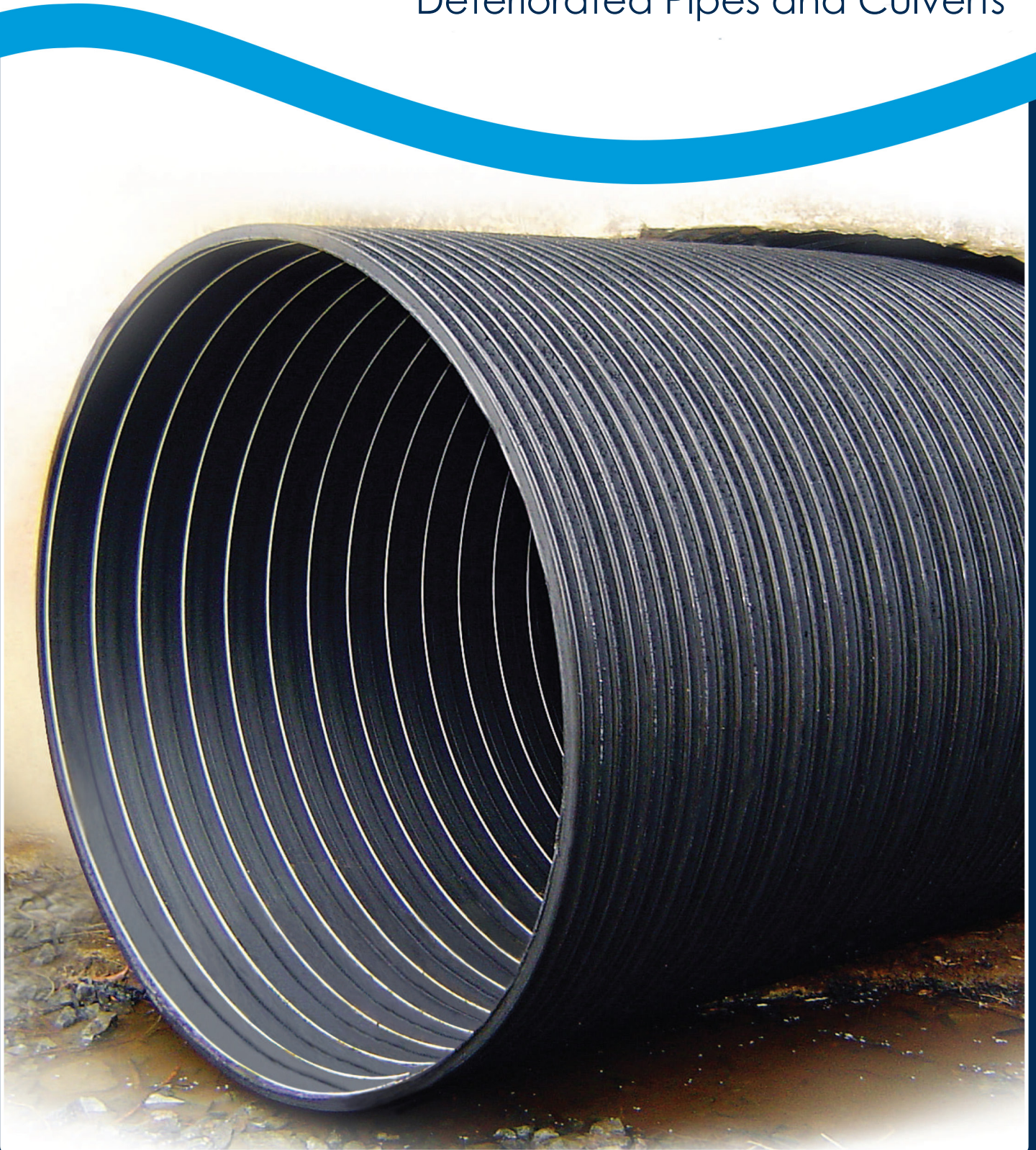




Ribline

Structural Lining for
Deteriorated Pipes and Culverts



Ribline

Ribline is a fixed-diameter, full-bore structural liner that restores the integrity, reliability and efficiency of aging pipes and culverts. It is suitable for pipe diameters up to 3000mm.

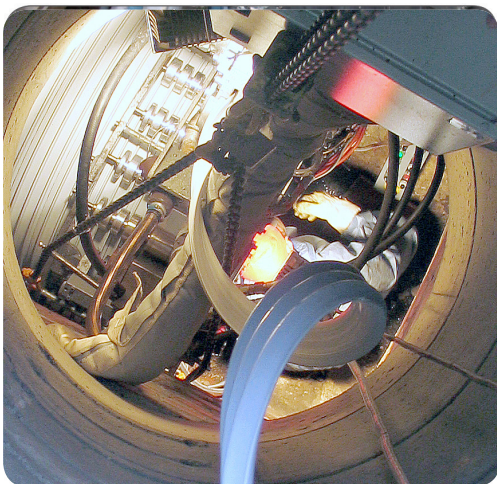
Ribline is a composite steel, reinforced, high-density polyethylene liner. The combination of the strength of steel and the durability of polyethylene results in a pipe that has a high strength-to-weight ratio.

The liner is supplied as a strip of profile that is spirally wound-in-place and installed by a mechanical process. The Ribline profile is progressively wound into the host pipe by a machine located at an existing access point. The liner diameter is set by a winding head. By changing the size of the head, all diameters can be achieved, so the internal diameter is maximised.

The profile strips are interlocked by extrusion welding the edges together inside the winding head. This makes installation fast, and provides a continuous strong, joint-free liner.

After the liner has been installed, the ends are sealed with structural epoxy. Cementitious grout is pumped behind the liner to fill voids between the liner and the deteriorated host pipe.

The polyethylene is UV resistant and provides an inert, smooth bore pipe, which has exceptionally high resistance to wear, making it ideally suited for long-term use in harsh environments.



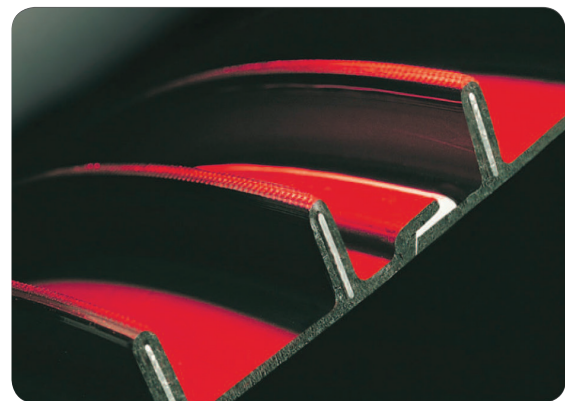
New configuration of profile strip now allows Ribline to be wound and slipped around.

Structural liner for diameters up to 3000mm

Ribline is the only system in the world that can provide a structural liner for diameters up to 3000mm.

The unique combination of high-density polyethylene and embedded steel reinforcing ribs make it possible to line at such large diameters.

The profile strip that forms the liner is available in a range of sizes. The steel provides the liner with high stiffness. The stiffness can be tailored to meet specific design requirements by changing the size of the steel reinforcing members during extrusion of the profile.



Superior solution

Ribline is the superior solution for large-diameter pipeline renewal. The Ribline installation system has been designed as a mobile pipe manufacturing plant, which is capable of cost-effectively producing large diameter liners on-site. The installation machinery is compact and portable so Ribline can be installed in remote locations.

The profile is delivered to site on spools to keep the size of the footprint minimal. Installing the liner by spirally winding and welding the profile together, enables continuous, limitless lengths of liner to be produced.

The ideal solution for culvert renewal

Ribline is the ideal solution for culvert renewal as it provides a full bore, continuous, joint-free structural pipe. The advantages of Ribline include:

- Minimal loss in cross-sectional area so grouting costs are lower
- Non-metallic, corrosion-resistant materials
- Excellent resistance to abrasion
- High-impact strength
- No need to construct launch pits
- No on-site pipe storage, which results in a smaller and safer site area
- Less impact to operational road networks during delivery of materials and installation

The environment

Ribline protects the environment by:

- Restoring the structural integrity of deteriorated pipes by providing a new high-performance pipe in a trenchless non-disruptive manner
- Reducing infiltration into the sewer network and keeping sewage inside
- Reducing the likelihood of flooding by eliminating blockages and restrictions caused by deteriorated pipes/culverts and restoring or even improving the hydraulic performance of the original pipe/culvert

The mobile installation equipment and support vehicles make installation possible in difficult-to-reach areas without the need for extensive clearing and site establishment, so there is less disturbance of the surrounding environment.

Ribline can be installed with some flow in the pipeline, reducing the need for bypassing, and there is less risk of sewage overflow.



Community

Working in sewers in built-up residential areas or in culverts that pass under roads or railway tracks can cause inconvenience and disruption, particularly if excavation is involved, the duration of work is long or the site area is large.

Ribline presents a number of community benefits, such as:

- The profile is delivered to site on spools, so there is no bulky on-site pipe storage and the size of the site footprint is reduced
- The liner is installed from existing access points, so excavating and maintaining large launch pits are not required. With a smaller work area and smaller support vehicles, there is minimal disruption to local traffic
- In sewer applications, the installation process takes place underground and is quick, quiet and odour free

Safety

Ensuring safety for its staff and the community is central to every task Interflow undertakes.

Working inside the confined spaces of sewers or culverts is challenging and can be dangerous. Ribline is safer because it can be installed from existing access points and requires less excavation. The installation is performed by machine and the process is operated remotely from a control panel above ground. This means minimal man-entry and increased safety. Automatic failure mode and emergency stop features on the installation machinery provide additional protection for our operators.

Ribline

Structural lining for deteriorated pipes and culverts from the leaders in pipeline renewal.

Experience

Ribline was first released to the market in 2004 and has been successfully installed in Asia, Europe, North America and the Middle East for pipe renewal and for stand-alone pipelines.

In Australia, Interflow has successfully installed Ribline in pipes from 900mm to 3000mm and often in challenging site conditions, with limited access and space.

Interflow leads the market for trenchless renewal of large-diameter pipes and culverts and was the first in the world to install Ribline. Interflow has amassed extensive knowledge and experience, so you can be assured that your assets will be renewed by the experts.



Testing

Polyethylene has long been recognised as a proven sewer and wastewater pipe material, due to its high resistance to abrasion, corrosion and chemicals.

The suitability of the material in Ribline configuration as a structural full bore pipe has been comprehensively tested and proven in the lab. Some of the standards that Ribline has been tested against include:

- Strength tested to EN ISO 9969 Determination of Ring Stiffness
- Long-term Strength tested to EN ISO 9967 Determination of Creep Ratio
- Impact tested to EN 744 – Test Method for Resistance to External Blows
- Pipe wall tested to EN 1979 – Determination of tensile strength of seam
- NCLS test to Determine Slow Crack Growth Resistance

Ribline is a world-class innovation developed in Australia by RibLoc, Interflow's technology partner. With Ribline you can be confident that you are installing a superior quality liner that has been proven in the lab and in the field.

Interflow®

Interflow Pty Limited

Sydney - Head Office

254 Toongabbie Road
Girraween NSW 2145, Australia

Ph +61 2 9631 2444
Fax +61 2 9636 5475

Email: mail@interflow.com.au
Website: www.interflow.com.au

New Zealand

18 Anvil Road
Silverdale 0932, New Zealand

Ph +64 9 443 7209

Website: www.interflow.co.nz