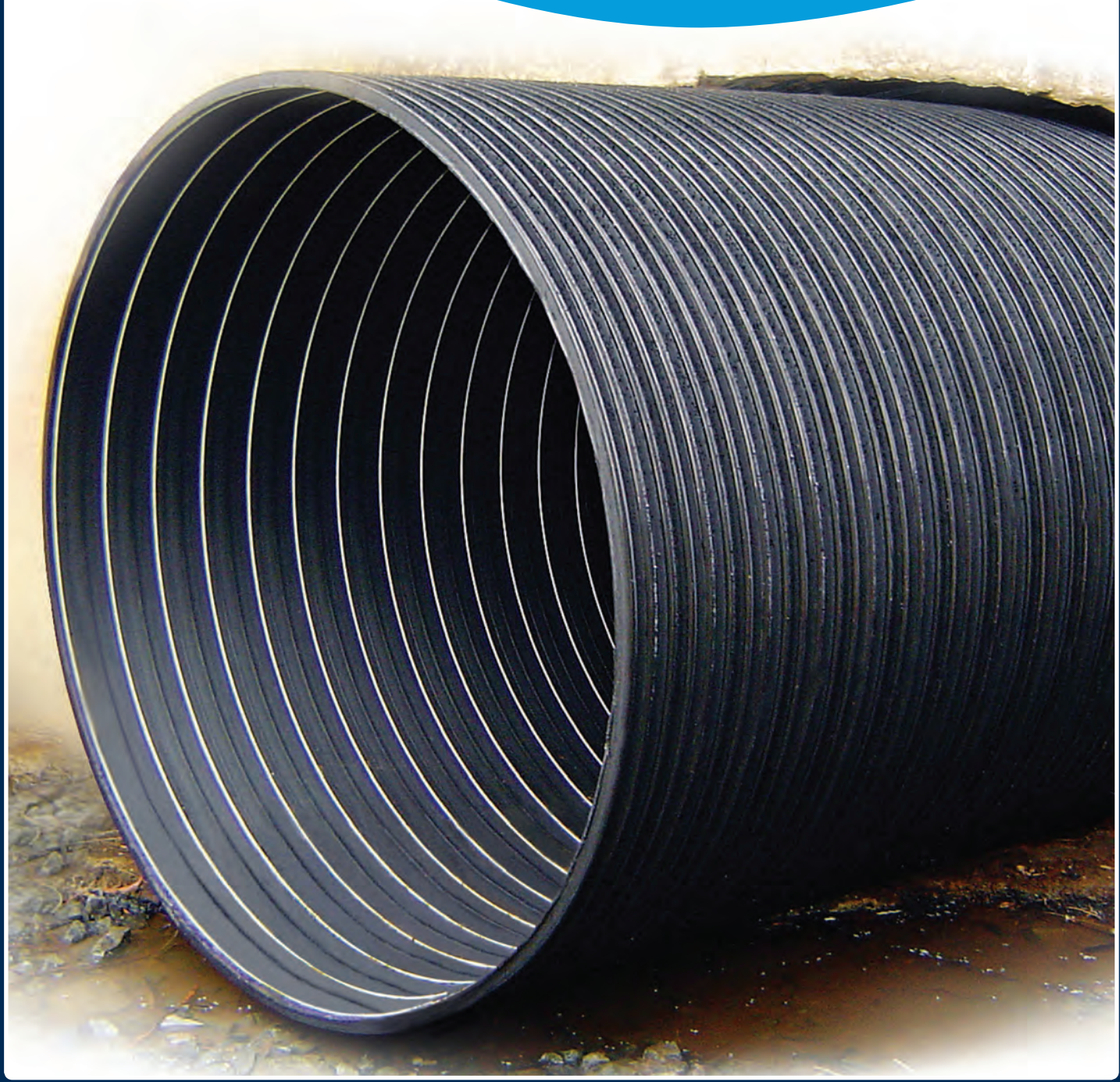
Interflow®

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 ageing pipes and culverts. It is suitable for pipe diameters up to 3000mm.

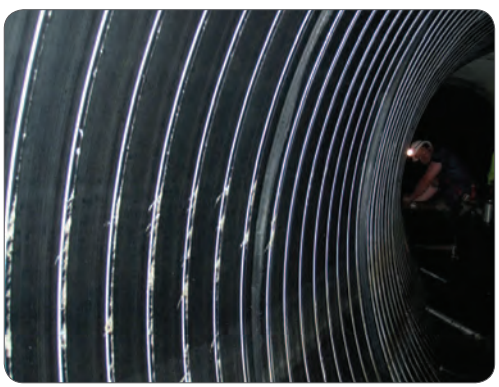
Ribline is a composite steel reinforced high density polyethylene liner. The combination of the strength of steel and the durability of polyethylene result in a pipe with a high strength-to-weight ratio.

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 any number of different diameters can be achieved so the internal diameter of the new pipe is always maximized.

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 with exceptionally high resistance to wear, making it ideally suited for long term use in harsh environments.



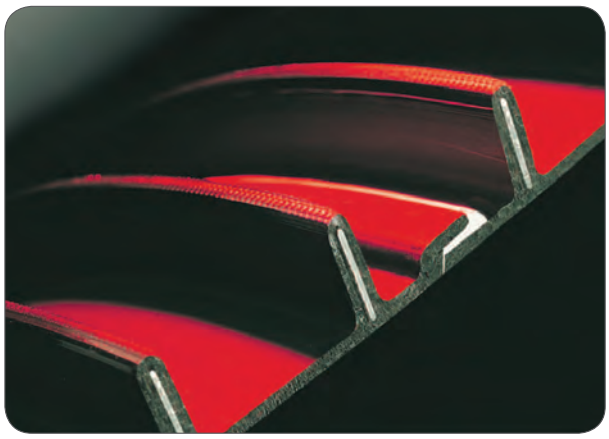
New configuration of profile strip now allows Ribline to be wound and slipped around

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 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 site foot-print minimal. Installing the liner by spirally winding and welding the profile together allows 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 Ribline advantage is;

- 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 resulting 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 passing under road or railway tracks causes inconvenience and disruption particularly if excavation is involved, or if the duration of work is long, or if the site area is large.

Ribline ensures minimal community disruption;

- Profile is delivered to site on spools so there is no bulky on-site pipe storage and the size of the site foot-print is reduced
- The liner is installed from existing access points so excavating and maintaining large launch pits are a thing of the past. 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 – an obvious community benefit.

Safety

Interflow strongly encourages safe work practices and protecting the safety of the community and our workers is paramount.

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 for our workers. Automatic failure mode and emergency stop features on the installation machinery provide additional protection for our operators.

Ribline

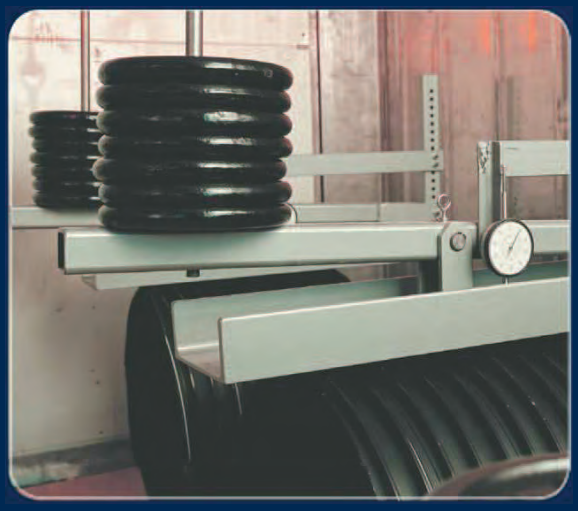
Structural Lining for Deteriorated Pipes and Culverts from the Leaders in Pipeline Renewal

Experience

Ribline was frst released to the market in 2004 and has been successfully installed in Asia, Europe, North America and the Middle East, not only for pipe renewal but also as stand-alone pipelines.

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

Interfow was the frst in the world to install Ribline and has since gained extensive knowledge and experience in the trenchless renewal of large diameter pipes and culverts. Today this experience has made Interfow market-leaders in trenchless large diameter pipe renewal 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 confguration 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 EN1979 – 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, Interfow's technology partner. With Ribline you can be confdent that you are installing a superior quality liner that has been proven in the lab and in the feld.

Interflow®

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