TECHNICAL DATA SHEET

Pipe-in Liner W Series

ASOE has established an array of trenchless pipe rehabilitation solutions tailored for pressure pipe systems. Among these innovations is the Pipe-in Liner, a Fabric Reinforced Flexible Plastic Pipe (FRFPP). The installation process is methodical: initially, the Pipe-in Liner is folded into a U-shape, followed by its insertion into the host pipes, and finally, expansion within the host pipe. Once installed, the Pipe-in Liner serves as a leak-resistant barrier within the host pipes. Notably, this solution represents a non-structural approach to pipe rehabilitation. With no structural connection between the host pipe and the liner, the liner operates independently, offering enhanced durability. Despite its inherent rigidity, the liner maintains a consistent round shape within the host pipes, even in scenarios with minimal internal or external pressure.

PRODUCT INFORMATION

RECOMMENDED APPLICATIONS

- DN50 – DN1400
- Water Mains
- Fire Mains
- Rising Mains

STANDARDS, CERTIFICATES AND APPROVALS

- AS/NZS 4020:2018
- NSF 61

PERFORMANCE

- Rehabilitating host pipes which cannot be repaired by digging.
- Free of maintenance after installation.
- Liners can be used in up to 45° bend or 90° bend with a 5D radius.
- Small working zone and limited requirement on the conditions of host pipes.
- Less influence on surrounding environment during installation.

TYPICAL PROPERTIES	METHOD	VALUE
Dimension		DN50 – DN1400
Max Install Length		4000m
Wall Thickness		6.0mm – 10.0mm
Raw Materials		High tenacity fabric reinforcement layer, abrasion resistant, PE cover, PE tube
Weight		Approx. 4.56 kg/sqm in 3mm
Temperature of Media		-40°C to 60°C
Abrasion Resistance	DIN 53516	10.5 mm3
Maximum Operating Pressure		1000kPa – 4000kPa
Maximum Bursting Pressure		3000kPa – 12000kPa
Flexural Strength Short-term		11.5 MPa
Flexural E-module short-term		240 MPa
Tensile Strength		17,000 – 262,000 kg
Chemical Resistance		Suitable for typical sanitary sewer flows
Design Life		50 Years
Warranty		Liner (5 Years) Fittings (2 Years)

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GENERAL PREPARATION & INSTALLATION

- Choose section of host pipes to be rehabilitated.
- Install by-pass hoses to keep transferring flow during rehabilitation.
- Dig construction pits at two ends.
- Inspect pipes with a mobile TV camera and analysis of video recordings.
- Mechanical coarse cleaning of host pipes with scraper pigs or equivalent.
- Clean host pipes by water jetting.
- Position Pipe-in Liners at the start pit and the pulling winch at destination pit.
- Install pulling head onto liner.
- Install hose guides.
- Fold Pipe-in Liner into U-shape and bind the liner with tape. (Factory folding optional)
- Pull liner into the host pipes.
- Approx 400m per hour pulled through (up to 300mm) otherwise by size will be communicated.
- Install PILC couplings onto the host pipes.
- Hydrostatic pressure test or air pressure test.
- Install transition pipes.
- Recover transferring fluid.
- Remove by-pass and close pit.

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