



Mandals Tubeman L has been specifically designed for trenchless rehabilitation of Industrial pressure pipelines transporting sewage, drain water, hydrocarbons, such as fuels, gasoline, natural gas, oil, and other non-aggressive liquids and gases. The liner is designed for low-pressure systems.

With Mandals Tubeman L we offer a more sustainable solution for the rehabilitation of old pipelines with minimal disruption to traffic, pedestrians, and the environment in general, with an improved CO₂ footprint and HSE performance. The hose liner is flexible in terms of the diameter variation of the original pipe, effortlessly passing bends even at long section lengths. Tubeman L is similar to the higher pressure Tubeman M.

Installation

Mandals supplies the liner leak-proof tested, and tape wrapped in a "U"-shape. Prior to installation a regular cleaning procedure is required of the host pipe and condition controlled by CCTV inspection.

The liner is pulled through the host pipe by using a winch and can be installed in pipes having bends up to 45° (R/D ≥ 5)¹. No steaming is needed to cure the liner, only a small amount of pressure is required to break the tape. Thereafter the liner is re-coupled and connected again to the existing infrastructure and the system is ready to be put back into operation.

Features

- Resistant to a wide range of chemicals.
- Full diameter recovery after pressure release.
- Excellent hydrolysis and fungus resistance.
- Outstanding wear and tear properties.
- Service Lifetime will depend on several important factors such as proper and correct installation, condition of the existing pipe, type of medium pumped through the liner, temperature, etc.

Construction

- Mandals Tubeman L is a semi-structural, stand-alone liner which will absorb all internal pressure while in operation.
- The "extrusion through the weave" production technology gives excellent bonding between thermoplastic polyether-based polyurethane cover and lining as well as firmly encapsulating the circular woven polyester reinforcement.

Properties

- Color options: Black (standard).
- Lengths up to 600m (≤ 6") and 400m (> 6").
- Max. recommended operational temperature is +30°C (86°F), but the actual fluid transferred will determine whether that temperature is appropriate. For higher temperature requirements, special polymer grades can be considered.

Tubeman L

| Article Number | Nominal Pipe Size DN | | Inner Diameter ² | | Wall Thickness | | Nominal Weight | | Maximum Working Pressure ³ | | Burst Pressure | | Actual Total Tensile Strength | |
|----------------|----------------------|-----|-----------------------------|-------|----------------|-----|----------------|------|---------------------------------------|-----|----------------|-----|-------------------------------|----------|
| | inch | mm | inch | mm | inch | mm | lbs/ft | kg/m | psi | bar | psi | bar | X1000 lbs | X1000 kg |
| TML020 | 3/4 | 20 | 0.59 | 15.0 | 0.05 | 1.2 | 0.05 | 0.07 | 260 | 18 | 650 | 45 | 1.2 | 0.5 |
| TML025 | 1 | 25 | 0.80 | 19.8 | 0.05 | 1.2 | 0.06 | 0.09 | 260 | 18 | 650 | 45 | 1.6 | 0.7 |
| TML065 | 2 1/2 | 65 | 2.00 | 51.0 | 0.11 | 2.8 | 0.33 | 0.52 | 320 | 22 | 800 | 55 | 6.4 | 2.9 |
| TML080 | 3 | 80 | 2.50 | 65.0 | 0.12 | 3.0 | 0.41 | 0.70 | 320 | 22 | 800 | 55 | 8.6 | 3.9 |
| TML100 | 4 | 100 | 3.00 | 76.0 | 0.13 | 3.3 | 0.57 | 0.85 | 260 | 18 | 650 | 45 | 11.9 | 5.4 |
| TML125 | 5 | 125 | 4.00 | 102.0 | 0.13 | 3.4 | 0.85 | 1.28 | 260 | 18 | 650 | 45 | 16.1 | 7.3 |
| TML150 | 6 | 150 | 4.50 | 113.0 | 0.14 | 3.6 | 1.03 | 1.54 | 260 | 18 | 650 | 45 | 22.9 | 10.3 |
| TML200 | 8 | 200 | 6.10 | 154.0 | 0.16 | 4.0 | 1.63 | 2.45 | 260 | 18 | 650 | 45 | 45.9 | 20.7 |
| TML250 | 10 | 250 | 7.60 | 193.0 | 0.17 | 4.2 | 2.09 | 3.14 | 245 | 17 | 630 | 44 | 57.5 | 25.9 |
| TML300 | 12 | 300 | 8.90 | 227.0 | 0.17 | 4.4 | 2.47 | 3.70 | 200 | 14 | 490 | 35 | 66.4 | 29.9 |
| TML350 | 14 | 350 | 10.80 | 274.0 | 0.18 | 4.6 | 3.22 | 4.80 | 175 | 12 | 435 | 30 | 78.8 | 35.5 |

Note: ¹Will depend on Operating Pressure and the R/D ratio. A higher R/D and/or Operating Pressure can allow a higher bend angle. ²Tolerance range based on ISO1307 Type C. ³Values are for hose only; allowed working pressure can not exceed coupling pressure rating. For questions about chemical resistance please check mandals.com/support.