

**NAYLOR**  
**DENLOK**

*Made in the UK*

Excellent Construction Products

**DENLOK®**



## Vitrified Clay Jacking Pipes

Product Manual  
and  
Specification Data

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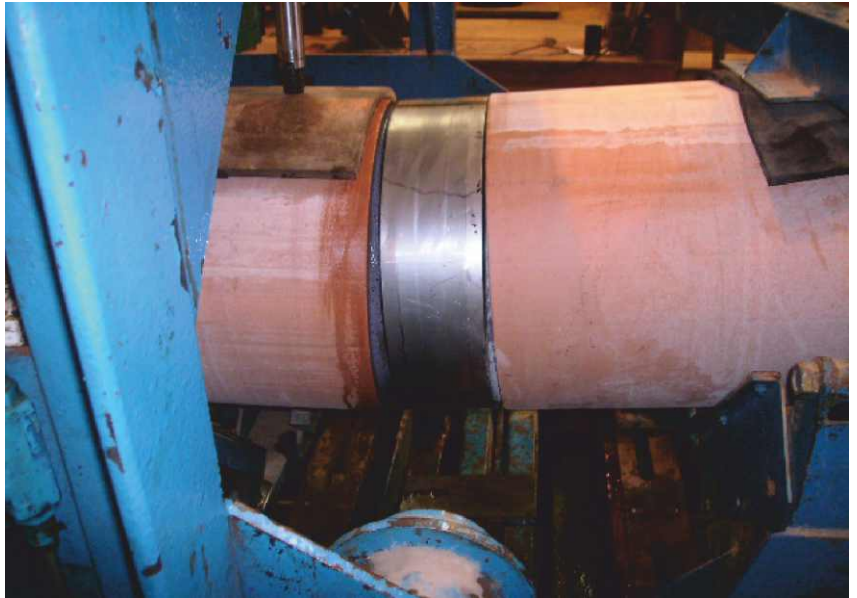
Materialprüfungsamt  
Nordrhein-Westfalen



# Product Features and Benefits

## Major advantages of Denlok® Vitrified Clay Jacking Pipes are:

- Denlok® is covered by and fully certified to EN295, the international standard for clay jacking pipes.
- High-axial strength for jacking force assurance.
- High crushing strength for load bearing capabilities.
- Smooth wall surface with very minimal frictional resistance.
- Excellent chemical resistance, Denlok® handles domestic, industrial and chemical effluents.
- Accurately machined pipe ends for easy load transference of jacking force.
- Wide range of diameters available.
- Worldwide international project-supply references.
- International Technical and Commercial support.



*Above:*  
Angular joint deflection testing



*Opposite:*  
Installed pipeline



*Opposite:*  
Pipe under research  
at a UK material  
laboratory



*Opposite:*  
Pipe being type tested  
in accordance with EN295-7  
Clause 4.3.1. Strength

# Product Specification

## Quality Assurance

Naylor Drainage manufactures its products under the control of an approved Quality Assurance System complying with the requirements of BS EN9001: 2015. Naylor Drainage Ltd is a Registered Firm of Assessed Capability (BSI Certificate No. FM01420).

## Third Party Assurance

Denlok® is Third Party Certified by:  
BSI UK Kitemark Licence No 20173.



## Product Specification

All Denlok® pipes and assemblies are manufactured in accordance with

**BS EN295-7 2013**

'Requirements for vitrified clay pipes and joints for pipe jacking'.

## Installation Specification

Product should be installed in accordance with

**BS EN12889-2000**

'Trenchless construction and testing of drains and sewers'.

## Seal Design and Function

The seals are designed as a sliding seal that is located in the pipe end rebate. No lubricant is required on either the seal or stainless steel sleeve as lubricant is enclosed within the sliding mantle. As the male spigot is inserted into the female sleeve the seal is compressed creating a positive 5 bar internal and external pressure.

The mantle rolls over the seal during jointing reducing friction to a minimum and acts as a cushion between the spigot and sleeve limiting differential movement under transverse shear loads once the joint is completed. The design optimises joint performance and provides an exceptionally high level of operational reliability.

Seals are available in either EPDM or Nitrile certified to EN681 - 1



### Root Infestation

Due to the high contact pressure a 5 bar seal reduces the risk of root infestation through the joint allowing for pipe installation under mature trees



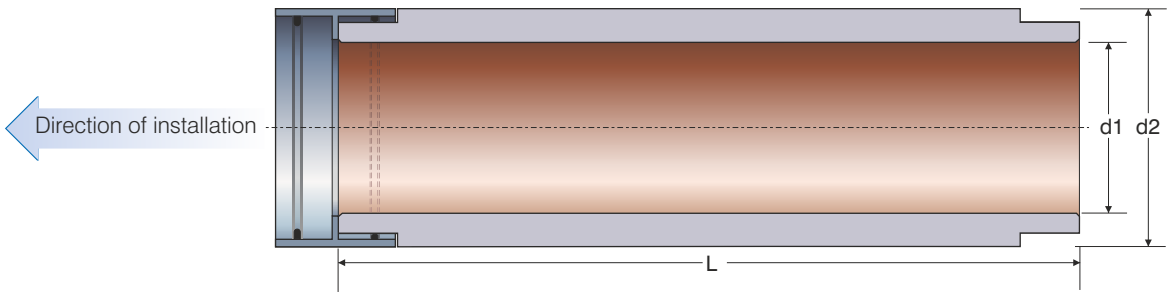
# Product Data

Naylor Denlok®  
**NC Range**

DN150

DN150 jacking pipe with EPDM seals and an injection moulded polypropylene sleeve and integral thrust ring, all elastomer conforms to the requirements of EN681 1.

A vitrified clay jacking pipe which is suitable for the construction of house connection installed by trenchless technology.



	Pipe Dimensions			Strength					
Nominal Size	ID	OD	L	Crushing Strength	Class Number	Jacking Strength	Jacking Strength	Seal Rating	Weight kg/m
DN mm	d1 mm	d2 mm	+/- 0.5 mm	kN/m FN		FJ kN	FJ MN	Bar	
150	149+/-3.0	208+/-3.0	996	64	400	900	0.9	0.5	45

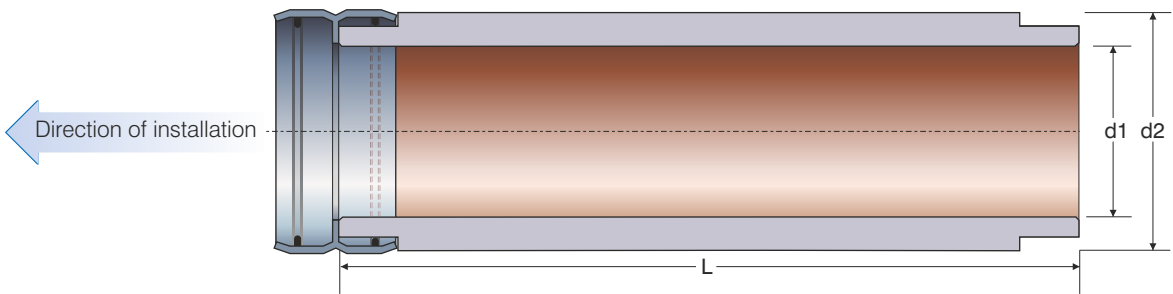
Naylor Denlok®  
**NC Range**

DN225 to DN300

Naylor Denlok NC range of jacking pipes consists of a vitrified clay pipe with parallel end faces and a square accurate machined seal interface.

All pipes have a factory fitted stainless steel coupling which incorporates a moulded EPDM elastomer seal, each seal has an integral EPDM thrust ring, which transmits the jacking forces during pipe installation, all elastomer conforms to the requirements of EN681 1.

By precision machining of the seal interface the coupling will withstand a 5 bar internal and external pressure allowing installation below the water table and protection from lubrication systems during pipe installation.



	Pipe Dimensions			Strength					
Nominal Size	ID	OD	L	Crushing Strength	Class Number	Jacking Strength	Jacking Strength	Seal Rating	Weight kg/m
DN mm	d1 mm	d2 mm	+/- 0.5 mm	kN/m FN		FJ kN	FJ MN	Bar	
225	225+/-4	293+/-4	996	81	360	1700	1.7	5	80
250	253+/-4	357+/-4	996/1996	100	400	3400	3.4	5	100
300	305+/-5	412+/-5	996/1996	120	400	4245	4.2	5	120

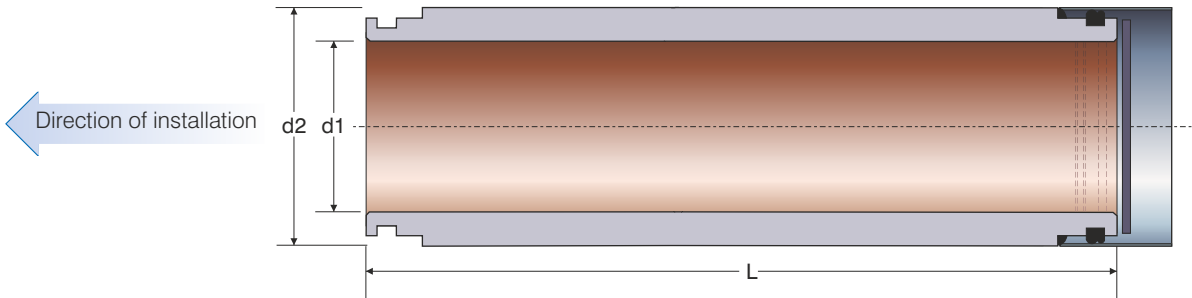
Naylor Denlok®  
**NS Range**

DN400 to DN600

Naylor Denlok NS range of jacking pipes consists a vitrified clay jacking pipe with parallel ends and a rebated accurate joint interface.

All NS range of pipes consists of a coupling manufactured from stainless steel, a 5 bar EPDM seal and MDF load transferee ring.

Each pipe supplied will have all seals and a stainless steel sleeve factory fitted with the thrust ring supplied separate in a cover to protect the material from the weather elements.



	Pipe Dimensions			Strength					
Nominal Size	ID	OD	L	Crushing Strength	Class Number	Jacking Strength	Jacking Strength	Seal Rating	Weight kg/m
DN mm	d1 mm	d2 mm	+/- 0.5 mm	kN/m FN		FJ kN	FJ MN	Bar	
400	406+/-5	552+/-5	984/1984	160	400	8135	8.1	5	240
450	450+/-5	585+/-5	984/1984	144	320	8370	8.4	5	250
500	494.5+/-5	639+/-5	984/1984	120	240	8735	8.7	5	260
600	609+/-7	758+/-7	984/1984	144	240	10580	10.6	5	340





### Clay Drainage



Vitrified clay drainage systems for open cut and trenchless installation.  
Telephone: 01226 790591  
Email: [sales@naylor.co.uk](mailto:sales@naylor.co.uk)  
Web: [www.naylor.co.uk](http://www.naylor.co.uk)

### Environmental



Hard and soft SuDs solutions for the construction and building industry.  
Telephone: 01226 794135  
Email: [environmental@naylor.co.uk](mailto:environmental@naylor.co.uk)  
Web: [www.naylor.co.uk](http://www.naylor.co.uk)

### Ventilation Ducting



For exhaust or reversible systems.  
Telephone: 01709 872574  
Email: [specialistplastics@naylor.co.uk](mailto:specialistplastics@naylor.co.uk)  
Web: [www.naylor.co.uk](http://www.naylor.co.uk)

### Concrete Lintels



Prestressed concrete lintels and precast concrete products.  
Telephone: 01226 320810  
Email: [lintels@naylor.co.uk](mailto:lintels@naylor.co.uk)  
Web: [www.naylor.co.uk](http://www.naylor.co.uk)

### Concrete Panels



Precast concrete structures for wall units, panels and holding tanks.  
Telephone: 01226 320810  
Email: [whitesconcrete@naylor.co.uk](mailto:whitesconcrete@naylor.co.uk)  
Web: [www.naylor.co.uk](http://www.naylor.co.uk)

### Yorkshire Flowerpots



Frostproof British made flowerpots.  
Telephone: 01226 794059  
Email: [info@naylor.co.uk](mailto:info@naylor.co.uk)  
Web: [www.yorkshireflowerpots.co.uk](http://www.yorkshireflowerpots.co.uk)

**NAYLOR**  
DRAINAGE

*Made in the UK*  
Excellent Construction Products

**NAYLOR DRAINAGE  
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### Open Trench Drainage Systems

Vitrified clay pipes for use in traditional open trench installation.



### Trenchless Drainage Systems

Vitrified clay trenchless technology jacking pipes.



### Chemical and Thermal Shock Resistant Drainage Systems

Vitrified clay drainage systems manufactured from Naylor unique Hatherware material.



### Flexible Repair Couplings

A range of versatile, high quality, flexible couplings used for jointing pipes of both similar and different materials and sizes.

**Naylor Industries plc -  
more than 100 years of  
production and supply to  
the Construction Industry**

- Vitrified clay pipe systems for trench and trenchless installation
- Thermachem - Chemical Drainage and Industrial Ceramics
- Band-Seal couplings for the repair of and connections into existing pipelines
- Plastic Land Drainage, Twinwall Ducting Systems and Access Boxes
- Yorkshire Flowerpots, a range of frostproof plant pots

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**NAYLOR DRAINAGE  
LIMITED**

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