-REFERENCES -

SEWERAGE BY-PASS DN 300 WITH L = 1,100 M

Oslo, Norway

Rehabilitation of a DN 1200 sewer gravity pipe and 20 manholes;

Primus Line Overland Piping for temporary above-ground sewerage transfer during renovation works

Transfer of up to 16,000 liters of water per minute

Two parallel lines Primus Line MD - 300/12" - F with I = 1,100 each

Difficult access, challenging terrain, high volume of water made Primus Line Overland Piping the perfect choice









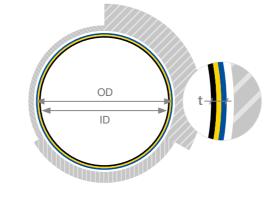








PRODUCT PORTFOLIO PRIMUSELINE



	Metric:						Imperial:						
	single-layer aramid design							single-layer aramid design					
	OD	t	ID	burst	MAWP	weight		OD	t	ID	burst	MAWP	weight
	mm	mm	mm	bar	bar	kg/m		inch	inch	inch	psi	psi	lbs/ft
Primus Line® DN 150	134	6,0	122	140	47,3	2,5	Primus Line® 6-inch	5.28	0.24	4.80	2.030	686	1.7
Primus Line® DN 200	183	6,0	171	100	33,6	3,5	Primus Line® 8-inch	7.20	0.24	6.73	1.450	487	2.4
Primus Line® DN 250	237	6,0	225	75	24,9	4,6	Primus Line® 10-inch	9.33	0.24	8.86	1.088	361	3.1
Primus Line® DN 300	284	6,0	272	64	21,5	5,6	Primus Line® 12-inch	11.18	0.24	10.71	928	312	3.8
Primus Line® DN 350	314	6,0	302	50	17,1	6,1	Primus Line® 14-inch	12,36	0.24	11,89	725	248	4.1



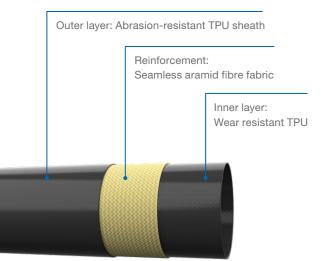
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PRIMUS LINE® **OVERLAND PIPING**

FEATURES



APPLICATION

Safe and rapid bypass installation

Bypassing a sewer pipe brings many challenges:

- The bypass should be in place in the shortest time period possible.
- The bypass line often has to pass rough and difficult to access terrain.
- The bypass has to cope with changing weather conditions and extreme temperature variations.
- The bypass liner has to accommodate the operating pressure and potential surge pressures and spills are of course a no-go.

The newly developed Primus Line Overland Piping overcomes all these challenges.

For over 20 years Rädlinger Primus Line has been well known for its pressure pipe rehabilitation systems. The team now used all their knowledge and experience to develop a worldwide unique aboveground system, which withstands even the harshest conditions.

The system consists of a newly developed liner matrix as well as a connection system specifically laid out for the Primus Line Overland Piping system.

The liner matrix consists of a TPU inside and TPU outside coating as well as an aramid core. The aramid reinforcement provides the Overland Piping system with an extremely high strength, thus enabling the liner to accommodate high operating pressures. The TPU makes the liner extremely wear resistant and is also not subject to corrosion. The black outer coating eliminates UV degradation.

Factory produced,

no on-site welding needed

PRIMUS LINE The prime solution for pipes.

Operational advantage

- seamless manufactured product with lengths of 1,000 m and more
- No welding of individual pipe lengths
- Quick & simple deployment of several kilometers per day
- Reusable for multiple applications with a product life expectancy of at least 20 years

Cost advantage

- Significant reduction of OPEX cost
- Reduce logistics cost due to coiling of pipe on compact reels
- Low investment cost for tools
- Minimum equipment required for installation deployment

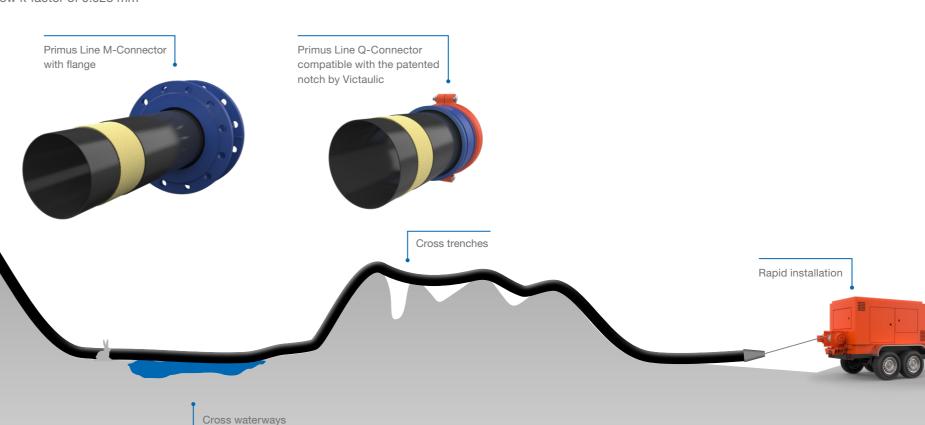
Technical Advantage

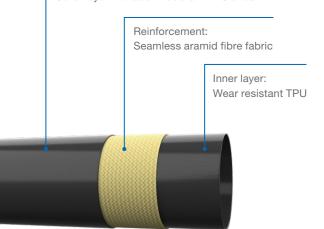
- High chemical and abrasion resistance
- High burst pressure performance including design safety factor
- 100% quality control during the manufacturing process and before shipping
- TPU inside and outside coating for improved flexibility during coiling of the pipe
- High UV protection

Manage difficult to access terrain

No impact on the environment

Low k-factor of 0.028 mm





MOST SUITED ENVIRONMENTS

Primus Line Overland Piping is the perfect solution when a safe and reliable temporary above-ground fluid transfer is required. The superior liner matrix consisting of its high performance polymers and the leak proof end connectors provide the operator with piece-of-mind when working in sensitive environments. Primus Line Overland Piping is an eco-friendly solution, designed for numerous deployments with a design life of 20 years, and convinces with rapid installation.

Headquarters in

Branch offices in Australia, China, Canada and the USA

Installation Partners worldwide



APPLIED WORLDWIDE

Rely on experience!

Rädlinger has been active in the construction industry for more than

Today, Rädlinger primus line GmbH is part of the Werner Rädlinger Group with about 400 employees. With more than 20 years of experience in trenchless pipeline rehabilitation and projects in more than 50 countries, Primus Line® belongs to the leading technologies in the field of trenchless pressure pipe rehabilitation in the world.

Primus Line relies on Germany as production site. A global partner network and own branches in Australia, China, Canada and the USA grant a fast and smooth project handling on

Install 1,000 metres and more per day