



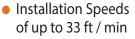
Flexible Technology for the Trenchless **Rehabilitation of Pressure Pipes**

Primus Line is an innovative technology for the trenchless rehabilitation of pressure pipelines for different media such as water, gas and oil. Primus Line is suitable for the transportation of various liquids in the field of water and holds drinking water approvals in numerous countries.

The ideal flow characteristics caused by an extremely smooth inner coating and the optimized systems for high-, medium-, and lowpressure requirements make Primus Line® an economical solution for the rehabilitation of aging pipelines. Thus, water authorities and network operators benefit from the reliable operation and a sustainable investment in their fixed assets.

- Fully flexible seamlessly woven Kevlar® fabric
- Minor installation footprint
- Decreased impact on traffic

- No curing, steaming or adhesion process
- Independent of weather conditions during installation
- 50+ year lifetime



- Up to 8,200 ft / pull
- Installation through multiple bends of up to 45°



Product Portfolio System Primus Line®

ystem Primus Lii	ile		-	OD															
Description Primus Line® low pressure				sure	Primus Line [®] medium pressure single-layer design					Primus Line [®] high pressure									
Kevlar®-fabric	single-layer design									double-layer design									
	OD*	t inch	ID inch	water** psi	weight lbs/ft	OD*	t inch	ID inch	water** psi	weight lbs/ft	gas** psi	weight lbs/ft	OD*	t inch	ID inch	water** psi	weight lbs/ft	gas** psi	weight lbs/ft
Primus Line [®] 6 inch	5.2	0.236	4.7	406	1.34	5.2	0.236	4.7	797	1.41	493	1.61							
Primus Line [®] 8 inch	7.2	0.236	6.7	290	1.95	7.2	0.236	6.7	580	2.02	362	2.22	7.3	0.315	6.7	1102	2.69	667	2.89
Primus Line® 10 inch	9.3	0.236	8.8	217	2.55	9.3	0.236	8.8	435	2.62	275	2.96	9.5	0.315	8.9	812	3.49	507	3.83
Primus Line® 12 inch	11.1	0.236	10.6	174	3.09	11.1	0.236	10.6	362	3.16	232	3.49	11.3	0.315	10.7	667	4.17	420	4.50
Primus Line® 14 inch						12.2	0.236	11.7	304	3.49	188	3.90							
Primus Line® 16 inch						13.9	0.236	13.4	290	4.03	174	4.44	14.0	0.315	13.4	580	5.38	362	5.85
Primus Line® 18 inch						15.8	0.236	15.3	232	4.57	145	5.11							
Primus Line® 20 inch						17.8	0.236	17.3	217	5.17	145	5.71							

The information in this document is based on our current knowledge and experience. Unless specified in the standard, the tests were carried out using internal methods on in-house testing equipment. Tests using other methods or on other test equipment would produce different results. As a result of our orgonicy development work, we reserve the right to modify products and change the features of the products. The information, recommendations and suggestions provided in this document cannot be used to derive any legally binding assurance or warranty for certain properties or the suitable of the product for a specific application.

^{*} Technical feasibility of different diameters after consulting the technical department of Rädlinger primus line GmbH.
** The indicated maximum working pressure is valid for a straight course of the pipe without bends. Maximum working pressure according to declaration of the technical department of Rädlinger primus line GmbH.



Date	Project	Location	Diameter (inch)	Distance (feet)	Pressure Rating (psi)
2014-2016	NAVFAC Water Distribution Pipe Rehab	Mechanicsburg, PA	6, 10, 12	22,000	150
2014	Reservoir Outlet Pipe Rehab	Santa Fe, NM	20	80	150
2015	Asbestos Cement Pipe Rehab	Phoenix, AZ	12	550	150
2017	Ductile Iron Pipe Under Highway	Las Vegas, NV	8	500	150
2017	PVC Pipe Rehab in Golf Community	Las Vegas, NV	16	2,200	150
2017	800 Foot Vertical Pipe Rehab	New York, NY	6	800	450
2018	Ductile Iron Pipe Under Highway	Las Vegas, NV	12	480	150
2018	90 Year Old Steel Pipe Rehab	Monterey Park, CA	18	650	200
2018	Cast Iron Pipe under Highway	Montecito, CA	6	180	150
2018	Ductile Iron Pipe Rehab Under Railway	Los Angeles, CA	12	190	150
2018	Forcemain Reahb	Connecticut	6	240	150
2018	PVC Pipe Under Highway White Pavement	Peoria, AZ	16	1,300	150
2019	Dupont Campus Water Pipe Rehab	Deleware	8, 10, 12	1,500	150
2019	80 Year Old Pipe Rehab	Glendale, CA	6	1,000	300
2019	Hilton Golf Course and Resort Pipe Rehab	Phoenix, AZ	8	150	150
2019	PVC Water Pipe in Drainage Wash	Maricopa, AZ	16	7,000	150
2019	Ductile Iron Pipe Rehab Under Canal	Scottsdale, AZ	12	450	150
2019	PVC and Ductile Iron Water Pipe	Chandler, AZ	12	370	150
2019	Concrete Pipe Rehab	Las Vegas, NV	20	500	150
2019	Pipe Rehab Under Canal	Phoenix, AZ	20	350	150
2019	Pipe Rehab in Utility Easement	Las Vegas, NV	20	500	150
2019	Water Distribution Pipeline Rehab	Maricopa, AZ	16	7,000	150
2019	Water One PCCP Pipeline Rehab	Johnson County, KS	24	1,890	125
2020	ABCWUA Water Main Rehab	Albuquerque, NM	6	400	200
2020	City of Phoenix Pipeline Water Main Rehab	Phoenix, AZ	12	200	200
2020	El Paso Power Well Water Line Rehab	El Paso, TX	10	1,000	150



CONSTRUCTION PRODUCT MARKETING

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PRIMUS LINE® INSTALLATIONS