

Quick-Lock



PRESSURE PIPE

QUICK  LOCK



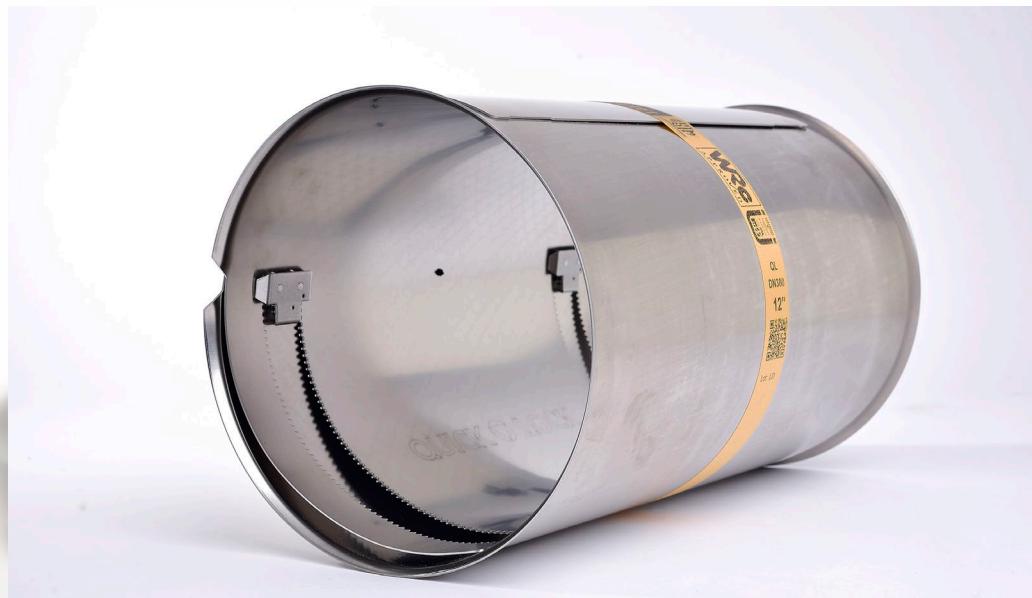


8. Quick-Lock PRESSURE PIPE LD + HD

QUICK  LOCK

Quick-Lock PRESSURE PIPE LD (low duty)

- ▼ permissible static pressure -0.9 bar to 50 bar / **-13.05 psi to 725.19 psi**
- ▼ permissible dynamic pressure -0.4 bar to 3 bar / **-5.80 psi to 43.51 psi**
- ▼ When using the Quick-Lock sleeve (non-walkable area) in pressurized pipelines (internal pressure), the pressure resistance can always only be guaranteed in conjunction with the use of a protector shield (around the outside of the seal). The protector shield prevents the seals from creeping into any gaps or fissures in the pipe.



Quick-Lock PRESSURE PIPE HD (heavy duty)

- ◉ permissible static pressure -0.9 bar to 50 bar / -13.05 psi to 725.19 psi
- ◉ permissible dynamic pressure -0.9 bar to 10 bar / -13.05 psi to 145.04 psi
- ◉ When using the Quick-Lock sleeve (non-walkable area) in pressurized pipelines (internal pressure), the pressure resistance can always only be guaranteed in conjunction with the use of a protector shield (around the outside of the seal). The protector shield prevents the seals from creeping into any gaps or fissures in the pipe.



Which pipe materials are suitable?

- ◉ all pipe materials used for pressurized pipelines, like...
- ◉ Plastic pipes (all types, like f. e. PVC, PE, PP, PP-HD,...)
- ◉ Fiberglass pipes and CIPP
- ◉ Cast iron pipes
- ◉ Carbon Steel pipes

Quick-Lock is conditionally suitable in the following cases:

- ◉ Pipes with bends and fittings

Components of the Quick-Lock PRESSURE PIPE

Stainless steel sleeve



1. Flared ends (only build **B2**)
2. metal overlap
3. Gear rack
4. locking mechanism
5. tape (HD blue, LD yellow)
6. plastic pin

Rubber seal



7. sealing nubs
8. parting line
9. overlapping rubber (mandatory cut at parting line)

Protector shield



- Protector shield is mandatory

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Flared Ends

Flaring is the bending of both ends of the Quick-Lock PRESSURE PIPE with a flaring machine.

The aim is to stiffen the edges and to protect the seal.

Quick-Lock PRESSURE PIPE LD + HD

- ◉ **B2:** with flared ends on both sides
for single installation
- ◉ **B1** = Build with flared end on one side
for the beginings or the ends of series
- ◉ **B0** = Build without flared ends
for the middle of series



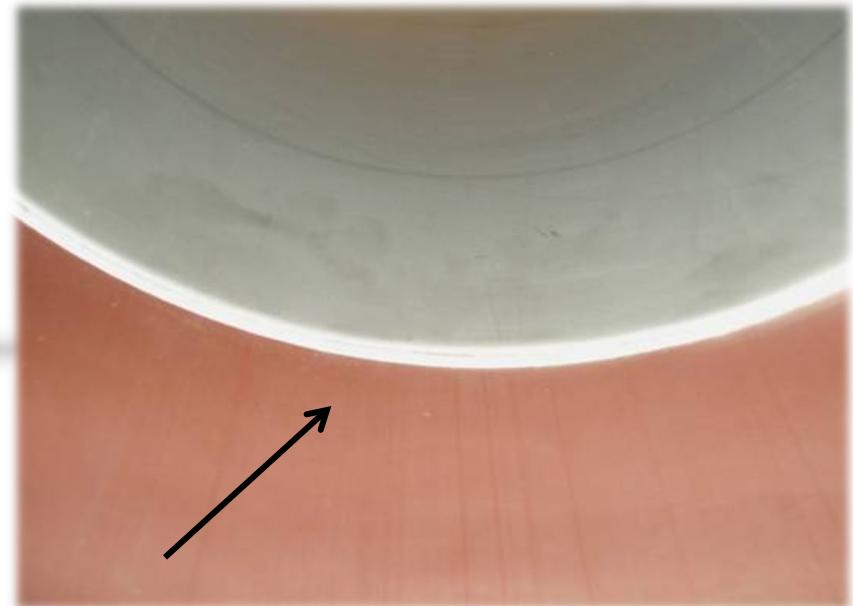
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Flared Ends

Advantages

- ◉ the sleeve fits tightly to the host pipe
- ◉ no deposits at the edge of the sleeve

- ◉ protects the rubber seal between the steel sleeve and host pipe
- ◉ higher resistance against high pressure cleaning process



QUICK ◉ **LOCK**

The locking mechanism

- ▼ stronger Locks on the Quick-Lock PRESSURE PIPE
- ▼ higher sheet thickness of the steel
- ▼ no retraction of the steel sleeve
- ▼ the gears and the gear rack of the locking mechanism are designed for a „stepless“ expanding of the Quick-Lock



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Seals

Choose the proper rubber seal depending on medium in the pipeline and temperature:

- ▼ Silicone
- ▼ NBR



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Silicone-Seal

Shore hardness 40

Tensile strength 10.4 Mpa / **1508,38 psi**

Main features:

- ◉ non-toxic in contact with food
- ◉ **use for potable water pipelines**
- ◉ very good elasticity at very low temperatures
- ◉ temperature resistant from -60° to +210° / **-76° to 410° F**
- ◉ very good electro-isulating properties

Not resistant against:

- ◉ Silicone oils and greases, fuel
- ◉ steam with more than +120° / **248° F**



NBR-Seal

Nitrile-Butadiene-Rubber

Shore hardness 35

Tensile strength 14.4 Mpa / **2088,53 psi**

Resistant against:

- ◉ Oil (hydraulic oil, mineral oil, petrol, heating oil, animal and vegetable oils)
- ◉ Butane, propane, methane, ethane
- ◉ Temperatures from -30° to +100° / -22° to 212°F
- ◉ good mechanical properties
- ◉ good to excellent gas and air impermeability

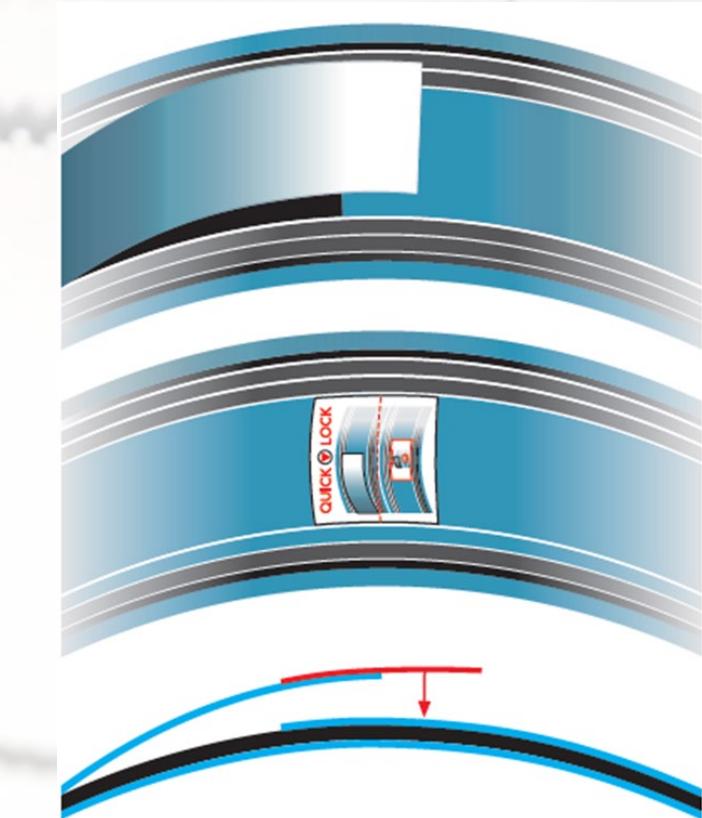
Not resistant against

- ◉ Fuels with a high aromatic content



The Protector shield

- ▼ additional „external“ stainless steel sleeve between the host pipe and the seal.
- ▼ placed between the sealing nubs
- ▼ The protector shield prevents the seals from creeping into any gaps or fissures in the pipe.
- ▼ Diameter rolled is smaller as diameter rolled of the Quick-Lock



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Application pressures

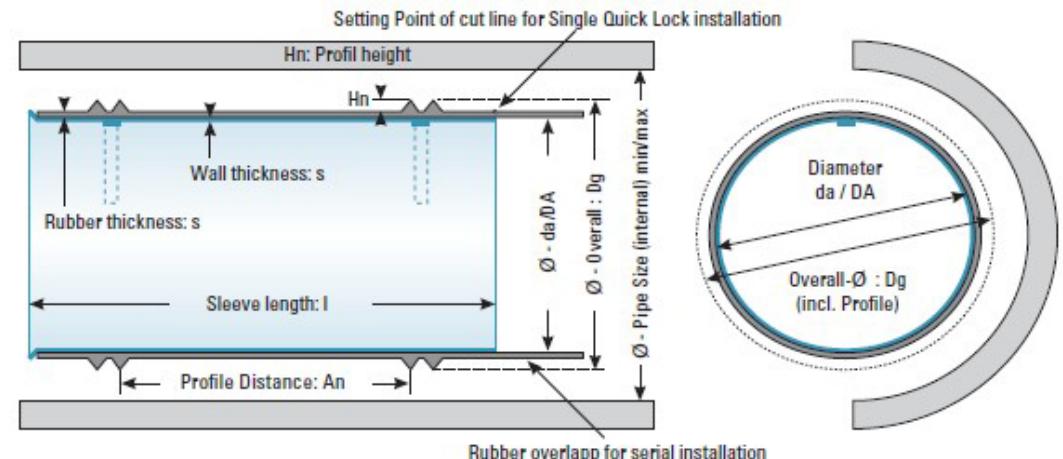
- ◉ the application pressures depend on the type of the pipe, the type of damage and the diameter (see table in the installers manual)
- ◉ always **expand slowly** because of the higher sheet thickness of the steel



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Technical Datasheet for PRESSURE PIPES (LD)

QUICK-LOCK DN 150- DN 800

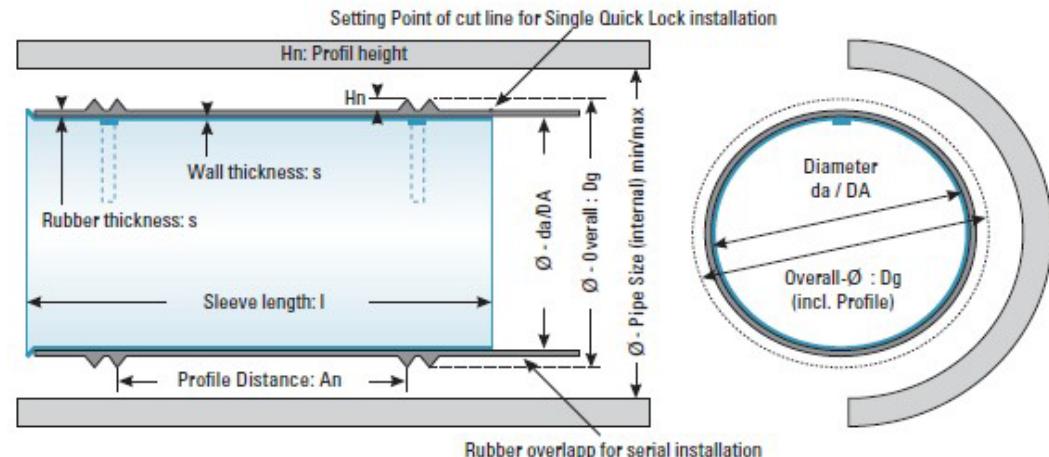


Quick-Lock	Silicone seal	sleeve length	total diameter rolled (with seal)	Suitable for pipes from / to		Stainless steel sleeve			Silicone-seal			Installationpacker	seal thickness incl. seal nubs	total weight (sleeve with seal)
				Pipe ID min.	Pipe ID max.	Wall thickness	Ø Pipe rolled	max. expanded diameter	seal-thickness	Height of seals	Height of seals			
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	VP	mm	kg
150	150	400	130	147	155	1	118	148	2,0	4,0	315	VP 100-150 VFW	6	2,27

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Technical Datasheet for PRESSURE PIPES (HD)

QUICK-LOCK DN 150- DN 800



Quick-Lock	Silicone seal	sleeve length	total diameter rolled (with seal)	Suitable for pipes from / to		Stainless steel sleeve			Silicone-seal			Installationpacker	seal thickness incl. seal nubs	total weight (sleeve with seal)
				Pipe ID min.	Pipe ID max.	Wall thickness	Ø Pipe rolled	max. expanded diameter	seal-thickness	Height of seals	Height of seals			
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	VP	mm	kg
DN	DN	I	DG	min DN	max DN	s	da	DA	s	Hn	An	VP 100-150 VFW	G	
150	150	400	130	147	155	1,2	118	148	2,0	4,0	315		6	2,27

Installation



Single installation

Length of damage **305 – 390mm / 12" – 15,35"**
(depending on the diameter of the pipe)

Serial installation possible

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Examples - Construction site



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8. Quick-Lock LinerEnd PRESSURE PIPE LD + HD

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Quick-Lock LinerEnd PRESSURE PIPE LD (low duty)

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- ◉ permissible dynamic pressure -0.4 bar to 3 bar / -5.80 psi to 43.51 psi
- ◉ the protector shield for LinerEnd is **optional**

Quick-Lock LinerEnd PRESSURE PIPE HD (heavy duty)

- ◉ permissible static pressure -0.9 bar to 50 bar / **-13.05 psi to 725.19 psi**
- ◉ permissible dynamic pressure -0.9 bar to 10 bar / **-13.05 psi to 145.04 psi**
- ◉ the protector shield for LinerEnd is **optional**

The locking mechanism

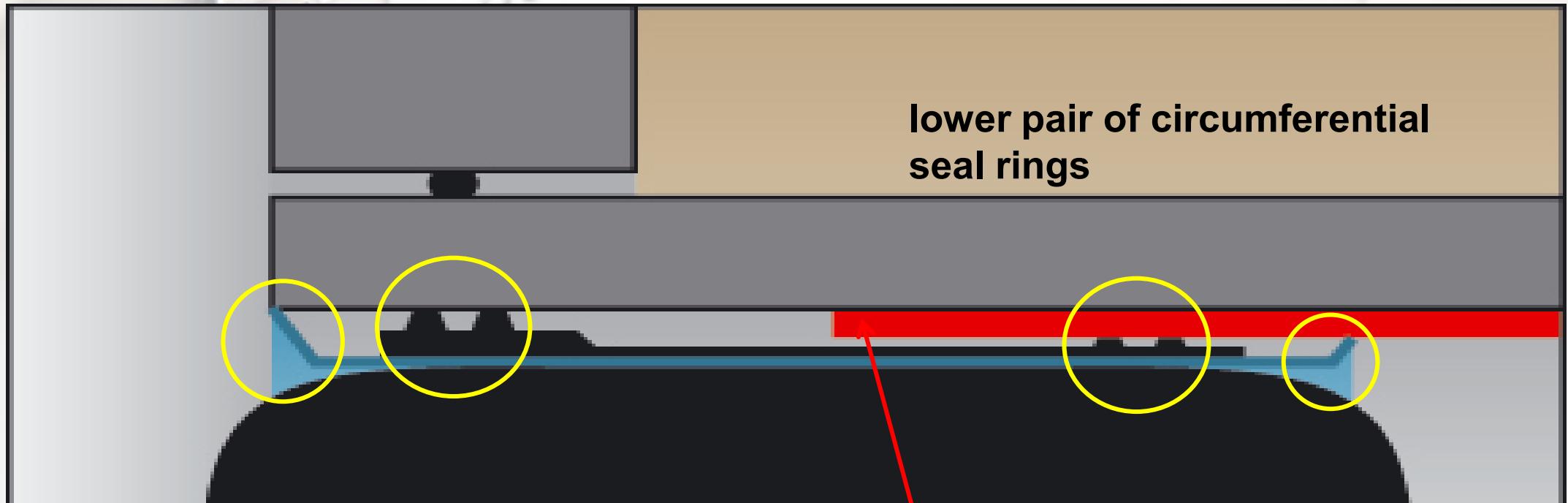
- ▼ stronger Locks on the Quick-Lock LinerEnd PRESSURE PIPE
- ▼ higher sheet thickness of the steel
- ▼ no retraction of the steel sleeve
- ▼ The gears and the gear rack of the locking mechanism are designed for a „stepless“ expanding of the Quick-Lock.



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Connection with LinerEnd sleeve

The key to balance the liner thickness in pressurized pipelines

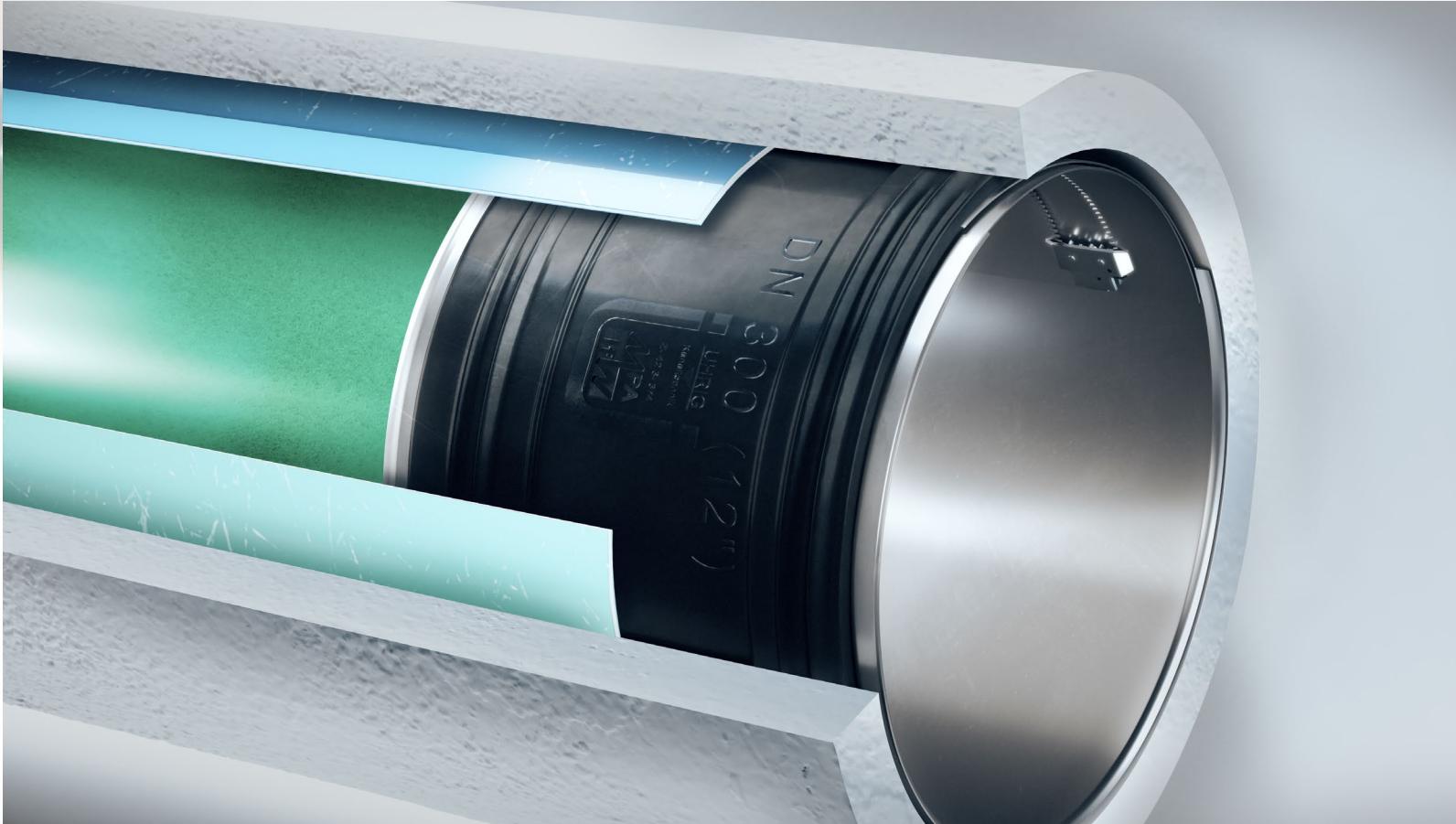


**thicker pair of circumferential
seal rings**

CIPP Liner

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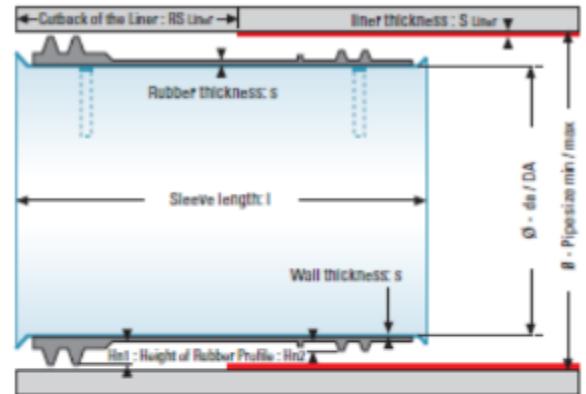
Propper connecton of the liner in the pressurized host pipe



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Technical Datasheet for PRESSURE PIPES LinerEnd (LD)

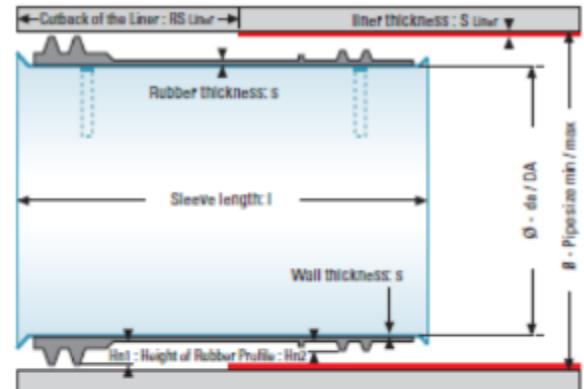


QUICK-LOCK LinerEnd DN 150- DN 800

Quick-Lock LinerEnd	Silicone seal	sleeve length	total diameter rolled (with seal)	Suitable for pipes from / to		Stainless steel sleeve			Silicone-seal			Linerthickness min - max	Liner trim length	total weight (sleeve with seal)
				Pipe ID min.	Pipe ID max.	Wall thickness	Ø Pipe rolled	max. expanded diameter	seal- thickness	Height of seals				
mm DN	mm DN	mm l	mm DG	mm min DN	mm max DN	mm s	mm da	mm DA	mm s	mm Hn1	mm Hn2	mm S Leiner	mm RS Liner	kg
150	150	250	137	146	160	1,0	119	146	2	9	4	3-8	130-140	1,33
175	175	250	160	171	190	1,0	142	175	2	9	4	3-8	130-140	1,90

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Technical Datasheet for PRESSURE PIPES LinerEnd (HD)



QUICK-LOCK LinerEnd DN 150- DN 800

Quick-Lock LinerEnd	Silicone seal	sleeve length	total diameter rolled (with seal)	Suitable for pipes from / to		Stainless steel sleeve			Silicone-seal			Linerthickness min - max	Liner trim length	total weight (sleeve with seal)
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mm DN	mm DN	mm l	mm DG	mm min DN	mm max DN	mm s	mm da	mm DA	mm s	mm Hn1	mm Hn2	mm S Leiner	mm RS Liner	kg
150	150	250	137	146	160	1,2	119	146	2	9	4			
175	175	250	160	171	190	1,2	142	175	2	9	4	3-8	130-140	1,33
												3-8	130-140	1,90

Approvals and certificates

- ▼ Siebert & Knipschild testing institute
- ▼ FH Münster University of Applied Sciences (internal test series) - Pressure Test
- ▼ KTW Approval Drinking water
- ▼ NSF - Certificate



- ▼ Silicone and NBR proof of resistance
- ▼ Silicone and NBR technical data sheet
- ▼ Data sheets stainless steel
- ▼ ASTM approval



Quick-Lock BIG

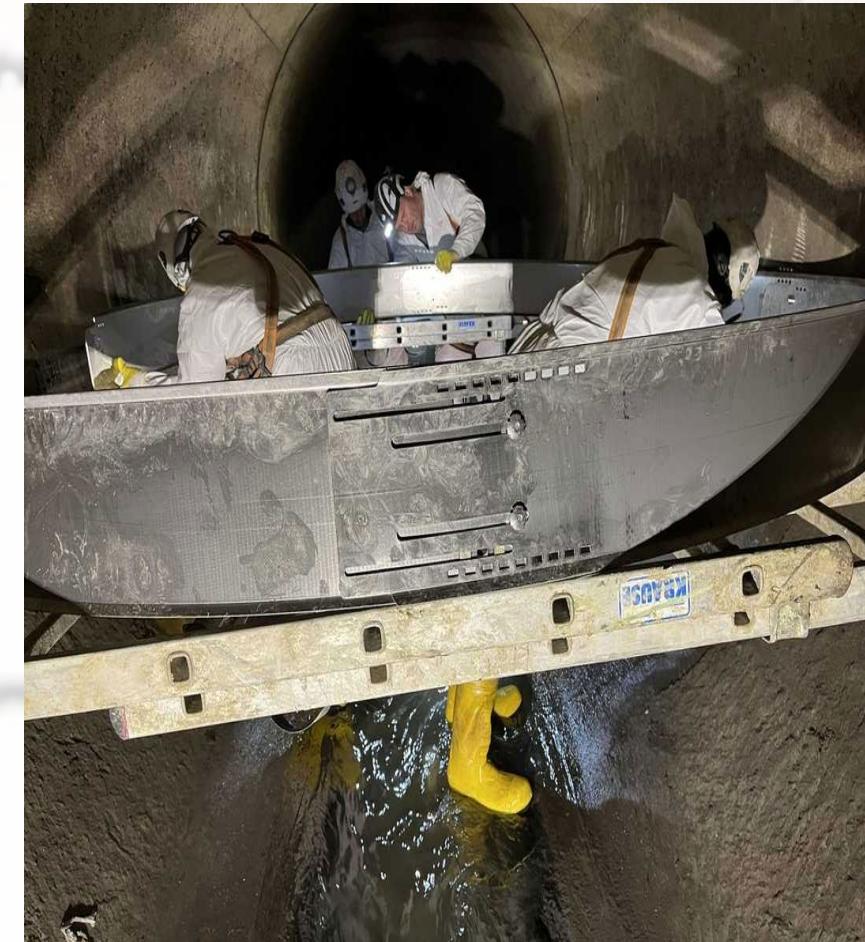
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First installation of Quick-Lock BIG DN 3000

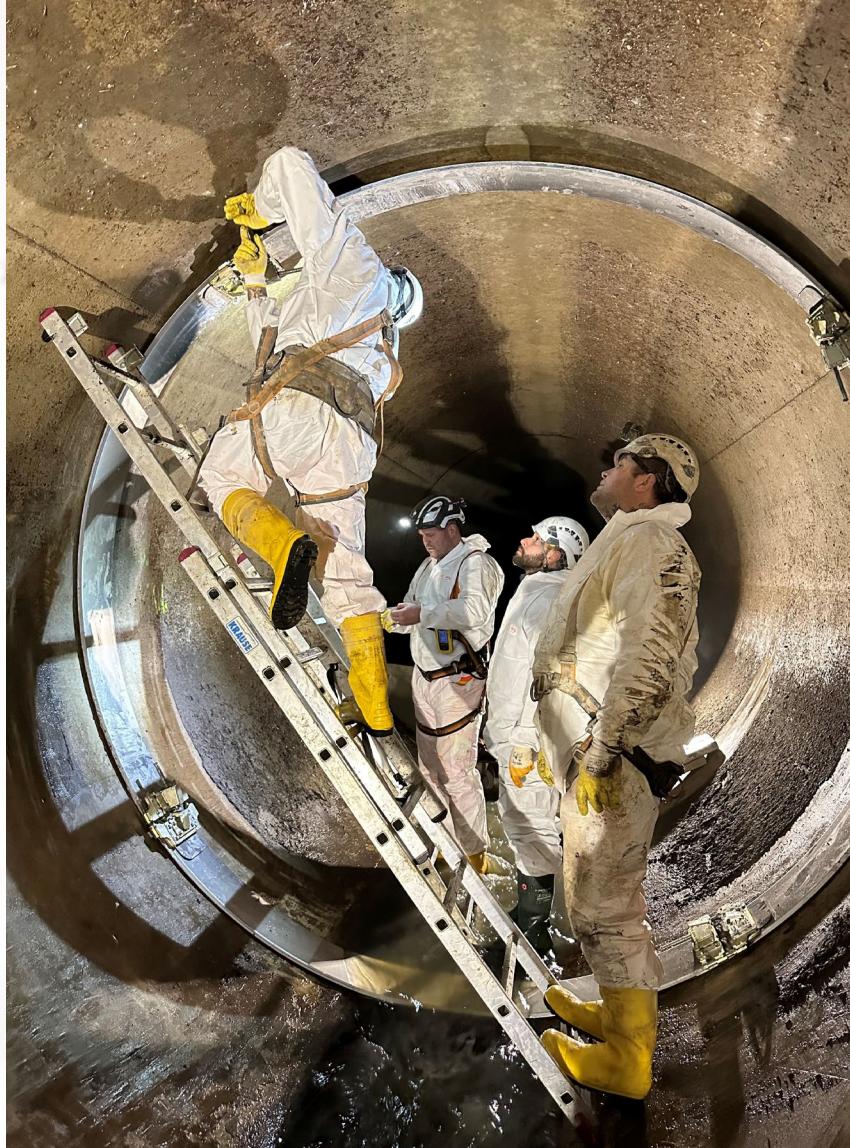


- Client: City of Aachen
- Supporting engineering firm: Ingenieurbüro H. Berg & Partner GmbH
- Contracting companies: Aarsleff GmbH and HS Kanalsanierung GmbH
- Storage sewer for rainwater in the Vaalserquartier district of Aachen
- Leaks at the joints and heavy infiltration
- Several Quick-Lock Big sleeves were installed as the best solution.

Pictures of the BIG DN 3000 construction site



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Pictures of the BIG DN 3000 construction site



Pictures of the BIG DN 3000 construction site



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Uhrig Group

Khaled Mhimdi

Mark André Haebler



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Newsletter
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Homepage



**Thank you
for your
attention!**

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