

Rapid, reliable & lasting - internal pipe sealing system for leaking sleeves & damaged areas

RedEx® Internal sealing sleeves

The RedEx® internal sealing sleeve is suitable for partial repair and sealing of leaking sleeves and damaged areas in accessible pipelines with dimensions from DN 800 - DN 2400 (DN 6000) and the liner end sleeve with dimensions from DN 190 - DN 1200 (DN 6000). Special profiles are also possible on request. The installation is carried out by hydraulic expander, hand pump, and stainless steel tools with accessories.



Applications

- internal sealing system for diameters DN 800 - DN 2400 (max. DN 6000)
- in liner end sleeves DN 190 - 1200 (max. DN 6000)
- in gravitation and pressure pipelines for potable water, service water, wastewater (saltwater, fuel, gas, bases, acids, and oil on request)
- for stable pipe materials vitreous ceramic, steel, reinforced concrete, concrete, asbestos cement, grey cast iron, GRP, PP pipes, and PE
- for circular profiles

System components

- EPDM sealing sleeve
- 2 x tightening straps with locking ends
- 1-3 x braces with locking ends, depending on the collar width
- 2-5 x shims
- 4-8 x adaptors for a locking mechanism
- synthetic material backing tape (optional)

Product characteristics

- rubber qualities EPDM (NBR or SBR on request)
- steel sections flat steel 50 x 3 mm, 50 x 5 mm and 50 x 8 mm
- stainless steel quality 1.4404, AISI 316 L; 1.4571, AISI 316 Ti, 1.4307, and AISI 304 L according to EN 10020
- internal pipe pressure (test pressure) 25 bar
- external pipe pressure 8 bar (infiltration)
- low-pressure/ vacuum suitable and adjusted, tested for dynamic load changes (10 million load changes

- from -0,9 to +10 bar]
- compensation of standard tolerances in the pipe diameter
- sealing of dimension changes (RedEx® Connect special solution)
- larger damaged areas in line offsets (RedEx® Connect special solution)
- pipes with sleeve misalignments and axial angles (pulled bends)
- temperature ranges -20° C to 140° C (EPDM)
- width collar sections: 260 mm, 360 mm, and 500 mm

Optional

- segmental bends, D-bends, and T-pieces on request
- non-standard temperature ranges possible (depending on the material)
- special profiles, special widths, or conical junction on request

Advantages

- a mounting tool specially tailored to nominal diameters for installing the RedEx® internal sealing sleeves (sale or rental)
- simple assembly and non-destructive disassembly
- numerous special solutions on request

Function of RedEx®

- rubber collar is positioned by hand at the point of rehabilitation
- hydraulic expanders presses sealing sleeve with stainless steel rings continuously to the pipe wall

Characteristics RedEx® components

1. EPDM sealing sleeve (rubber ethylene-propylene-diene-monomer)

Collar section 260 mm, 360 mm and 500 mm RedEx®-Connect (special lengths/ line offsets)

Parameter EPDM according to DIN EN 681-1

Density	min. 1,17 kg/dm ³
Rigidity	70 ± 5 Shore A
Tensile strength	> 9 MPa
Elongation at break	> 200 %

2. Stainless steel components: steel strips including lock elements, shims, and adaptors

Stainless steel 1.4307 (potable water)/ 1.4404/ 1.4571

Parameter steel according to DIN 10088-1

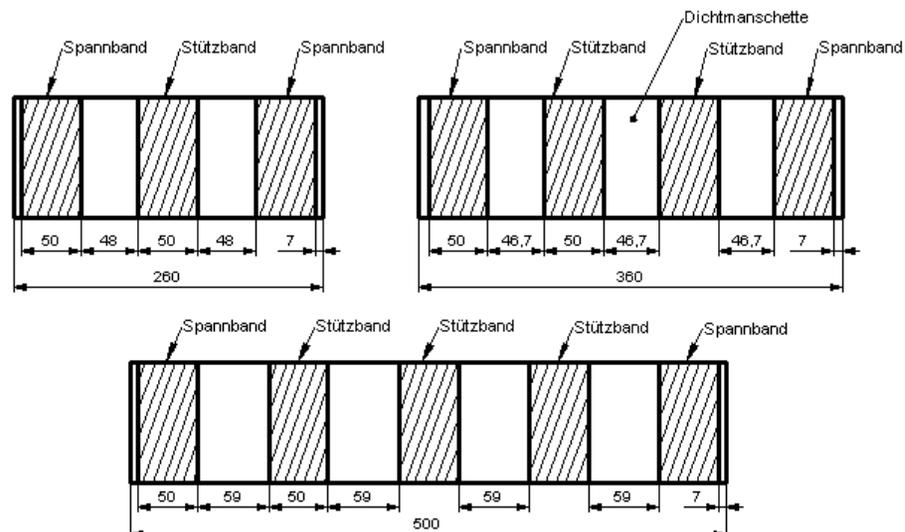
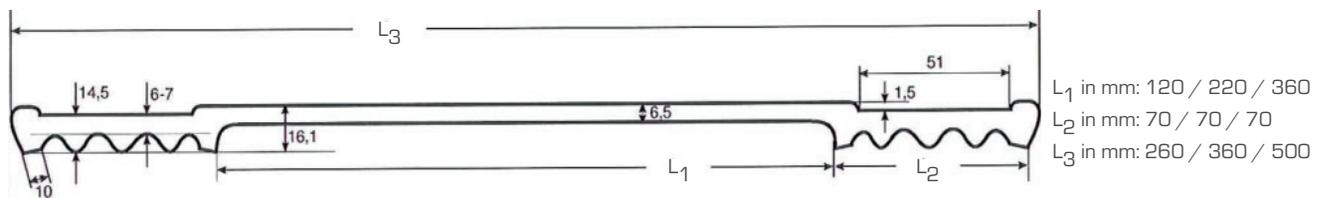
Steel strapping profile	50 x 3 mm for DN 190 - 490 50 x 5 mm for DN 500 - 2400 50 x 8 mm from DN 2500
0,2 %-yield strength	200 - 240 N/mm ²
Tensile strength	500/700 N/mm ²
Elongation at break longitudinally	40 %
Optional braces (according to DIBt)*	1x brace at 260 mm length 2x braces at 360 mm length 3x braces at 500 mm length

3. Synthetic material backing tape (PVC or PE)

Application for groundwater pressure

Length depending on collar length	10 cm at 260er length 20 cm at 360er length 30 cm at 500er length
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if pressure is very high or if there is major damage, sheet metal can be placed underneath



* if collar length is different, the distance between two bands should be chosen with a maximum distance of 59 mm