



LINK-SEAL® W

Flexible link chain for the sealing of wall penetrations for gas, water, sewage pipes and cables



AREA OF APPLICATION

Suitable for applications in the drinking water sector



PROPERTY

Temperature range: -40 °C bis + 80 °C

UV-resistant: Yes

Pressure-tight: 5 bar

Color: black

Electrical isolation: with a dielectric strength of 500 V/mm

SIZE

LS 200 bis LS 650



Building construction



Civil engineering



Water



HVAC



Energy



Oil



Gas



Industry



PRODUCT INFORMATION

FEATURES

- Easy and quick installation due to pre-assembled modules
- High quality rubber parts ensure long lifetime
- Protected position in the masonry
- Suitable for retrofitting
- Choice of galvanized 8.8 or stainless steel bolts A4-70
- Electrically isolating
- Hydrostatic sealing against pressing water

AREAS OF APPLICATION

- For sealing wall penetrations of gas, Water, sewage pipes and cables (considering the calculation basis and the suitability of the product on site)
- Tank embeddings
- Casing pipe seals

PRODUCT DESCRIPTION

The radial expansion of the rubber parts ensures a permanent, pressure-tight and secure sealing of the annular space. For particularly thin-walled plastic pipes such as pre-insulated, flexible casing and corrugated pipe systems, a Compakt Temp or Compakt Super Soft is recommended.



NOTE

- The surface of the core drilled holes should be coated to protect the reinforcement from corrosion. Therefore we recommend ProteX epoxy resin or ProteX sealant. The specified values for the pressure tightness are valid at 23 °C. For different, higher permanent operating temperatures, changing temperatures and permanent pressure, it might be necessary to fit an ejection safety device.
- Please be sure to ask us in advance about the technical feasibility of planned applications for which there is no description (e.g. applications in the biogas or food sector).

RECOMMENDATIONS

- PipeX FZH
- ProteX Epoxy Resin



CERTIFICATES

TEXT

Lloyds Register: "Pressure Test for Wall Penetration Seal, Type LINK-SEAL® Modular Seal";
Certificate No: APE 0409369/1

Product certificate: - TUV SUD: Production facilities audit (annual) - TUV SUD: Technical report DDA4/118/94 Component testing of a modular seal

Production facility audit (annual):

FHRK quality seal FHRK test specifications GE 101 compakt seals: (Test report no. G 30 322-6-1), closed version Compakt Solo / Compakt Temp / Compakt Super Soft / Compakt with oversized flange / Compakt Multicable / Compakt Varia / Compakt Blind / Compakt SpeX / Compakt Combi

Drinking water applications: ACS: Certificate of sanitary conformity

Drinking water applications: Pressure plate testing Materials testing DVGW W270 KTW

Drinking water applications: Sealing elements material testing DVGW W270 UBA ELL

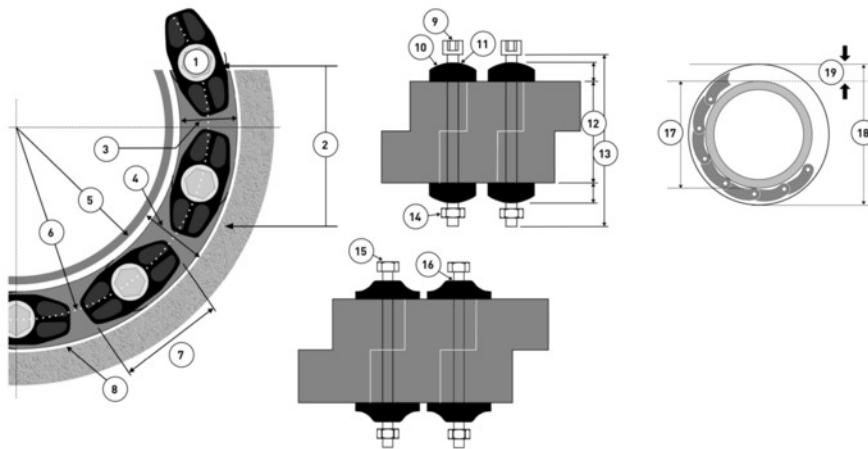
Drinking water applications: Radon seal test report Dr Joachim Kemski Radon seal LINK SEAL® W sealing material



TECHNICAL INFORMATION

The suitable LINK-SEAL® for the application results from the thickness of the annular space between the casing pipe (wall sleeve) and carrier pipe. The perfect LINK-SEAL® is smaller than the annular space in a non-tensioned condition and larger in tensioned- condition.

To calculate the appropriate LINK-SEAL® annular space seal, use our online calculation program or the type selection as a basis for calculation. This is available for you to download online as a PDF



- 1 Hexagon nut
- 2 Arc length
- 3 Thickness non-tensioned
- 4 Annular space
- 5 Outer diameter pipe
- 6 Bolt pitch circle
- 7 Longer pressure plate
- 8 ID Sleeve, casing pipe or core hole

- 9 Allen head bolt
- 10 Pressure plate
- 11 Compression assist boss
- 12 Height sealing element
- 13 Total height element
- 14 Hexagon nut
- 15 Allen head bolt [LS 325 & LS 360-700]
- 16 Steel washers [LS 325 & LS 360-700]

- 17 d = Medium pipe OD
- 18 D = Wall sleeve ID
- 19 Annular space



TYPE SELECTION

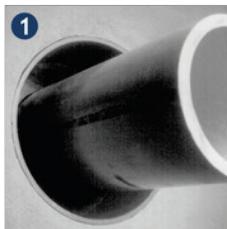
Article No.	Size	Suitable for core drilling	Suitable for carrier pipe OD from - to	Number of segments for core drilled hole	GTIN
2-025-00510	LS 200	80 mm 100 mm 125 mm 150 mm	48 - 53 mm 68 - 75 mm 95 - 100 mm 118 - 125 mm	8 9 12 14	4062987010140
2-025-00511	LS 275	50 mm 80 mm 100 mm 125 mm	10 - 18 mm 40 - 48 mm	4 8 10 13	4062987010157
2-025-00512	LS 300	100 mm 125 mm 150 mm 200 mm 250 mm	55 - 64 mm 80 - 89 mm 105 - 114 mm 155 - 164 mm 206 - 212 mm	6 8 10 14 18	4062987010164
2-025-00513	LS 315	100 mm 125 mm	48 - 57 mm 73 - 82 mm	6 8	4062987010171
2-025-00514	LS 325	250 mm 300 mm 350 mm 400 mm 450 mm 500 mm 600 mm	240 - 253 mm 294 - 303 mm 340 - 353 mm 390 - 403 mm 440 - 453 mm 540 - 553 mm	9 11 13 15 17 19 23	4062987010188
2-025-00515	LS 340	100 mm 125 mm 150 mm 200 mm 300 mm 350 mm	32 - 45 mm 58 - 74 mm 82 - 99 mm 132 - 149 mm 234 - 244 mm 286 - 296 mm	5 7 9 13 20 24	4062987010195
2-025-00516	LS 360	125 mm 150 mm 200 mm 250 mm 300 mm 350 mm 450 mm	42 - 61 mm 66 - 82 mm 116 - 133 mm 166 - 186 mm 216 - 236 mm 266 - 286 mm 375 - 386 mm	5 6 9 12 15 18 24	4062987010201
2-025-00517	LS 400	250 mm 350 mm 400 mm 450 mm 500 mm 600 mm	158 - 177 mm 258 - 274 mm 308 - 327 mm 358 - 377 mm 408 - 427 mm 508 - 527 mm	7 10 12 14 15 19	4062987010218
2-025-00518	LS 410	150 mm 200 mm 300 mm 350 mm	58 - 76 mm 108 - 124 mm 208 - 226 mm 258 - 274 mm	5 7 12 14	4062987010225
2-025-00519	LS 425	250 mm 350 mm 400 mm 450 mm 500 mm 600 mm	178 - 192 mm 276 - 293 mm 326 - 341 mm 376 - 393 mm 426 - 443 mm 526 - 543 mm	7 11 12 14 16 19	4062987010232
2-025-00520	LS 440	300 mm 400 mm 450 mm 500 mm 600 mm	190 - 210 mm 292 - 310 mm 345 - 356 mm 390 - 410 mm 490 - 503 mm	8 11 13 14 17	4062987010249



Article No.	Size	Suitable for core drilling	Suitable for carrier pipe OD from - to	Number of segments for core drilled hole	GTIN
2-025-00521	LS 475	150 mm	53 - 67 mm	5	4062987010256
		200 mm	103 - 117 mm	7	
		250 mm	153 - 163 mm	9	
		350 mm	253 - 267 mm	14	
		400 mm	303 - 317 mm	16	
		450 mm	355 - 367 mm	19	
		600 mm	503 - 509 mm	25	
2-025-00522	LS 500	300 mm	157 - 173 mm	7	4062987010263
		350 mm	207 - 229 mm	9	
		400 mm	264 - 279 mm	10	
		450 mm	307 - 329 mm	12	
		500 mm	357 - 379 mm	14	
		600 mm	457 - 479 mm	17	
		350 mm	223 - 239 mm	9	
2-025-00523	LS 525	400 mm	273 - 289 mm	11	4062987010270
		450 mm	327 - 339 mm	12	
		500 mm	373 - 389 mm	14	
		600 mm	473 - 489 mm	17	
		250 mm	134 - 154 mm	8	
2-025-00524	LS 575	300 mm	184 - 204 mm	10	4062987010287
		350 mm	234 - 254 mm	12	
		400 mm	284 - 304 mm	14	
		450 mm	335 - 354 mm	16	
		500 mm	385 - 400 mm	18	
		400 mm	204 - 234 mm	9	
2-025-00525	LS 625	450 mm	254 - 265 mm	10	4062987010294
		500 mm	304 - 334 mm	12	
		600 mm	404 - 434 mm	15	
		350 mm	182 - 210 mm	8	
2-025-00526	LS 650	400 mm	234 - 255 mm	9	4062987010300
		450 mm	285 - 311 mm	11	
		500 mm	335 - 359 mm	12	
		600 mm	436 - 457 mm	15	



INSTALLATION

**1**

Center the pipe, cable or conduit in wall opening or casing. Carrier pipes must be suitable, dimensionally stable and without damage in the sealing area. Make sure the pipe is adequately supported on both ends. The LINK-SEAL® can only perform a sealing function and does not serve as a pipe support or fixed point. All building and pipeline guidelines are to be observed

**2**

Use only in suitable wall sleeves, installation tolerances according to dimensions in the calculation program. The specified clamping ranges must be observed here. This also applies to the dimensions of the carrier pipes. With suitable sealing surface in the inner wall and suitable rigidity (dimensional stability after installation) of the wall sleeve. Loosen rear pressure plate with nut just enough so links move freely towards and away from each other connect both ends of belt.

**3**

Check to be sure bolt heads are facing the installer. Extra slack or sag is normal. Do not remove links if extra slack exists. Note: On smaller diameter pipes, links may need to be stretched.

**4**

Slide belt assembly into annular space. For larger size belts, start inserting LINK-SEAL® modular seal assembly at the 6 o'clock position and work both sides up toward the 12 o'clock position in the annular space.

**5**

Slide belt assembly into annular space. For larger size belts, start inserting LINK-SEAL® modular seal assembly at the 6 o'clock position and work both sides up toward the 12 o'clock position in the annular space. Do not tighten any bolt more than 4 turns at a time. Continue in a clockwise manner. Make 2 or 3 more passes at 3 turns per bolt until links have been uniformly compressed and the max. torque moment (see table) is reached.

**6**

Repeat tightening after approx. 2 hours. Especially for LINK-SEAL® Type LS 500 up to LS 700 it might be necessary (depending on the installation conditions such as annular space, temperature, etc.) to tighten again for several times.

WHAT MUST BE OBSERVED

The PSI warranty is limited to the replacement of defective material.

The suitability of the product for the specific use must be checked by the user on his own responsibility. use.

WHAT NEEDS TO BE DONE

- Check that the sealing elements, the pipe surface and the inner wall of the core drill or wall sleeve are free of dirt and other contaminants.
- Make sure that the pipe is centered.
- Install the chain and ensure that the pressure plates are evenly aligned.
- install the exact number of segments specified.
- make sure the pipe is properly supported when backfilling.

WHAT THEY MUST NOT DO

- Do not install the chain until the pressure plates are aligned.
- Do not install LINK-SEAL® annular space seals on spiral pipes.
- Do not tighten one bolt before moving on to the next.
- do not use a cordless, impact or drill screwdriver.
- note that the LINK-SEAL® is not a fixed point.



INSTALLATION NOTE

We expressly draw your attention to the fact that the installation must be carried out by an authorized specialist company in accordance with the installation instructions.

RECOMMENDATION

To create a suitable sealing surface, we recommend coating the core holes with PSI KB epoxy resin. This serves to protect the concrete and to smooth out any shrinkage holes/scoring.

TOOLS

Cleaning material/preparation, measuring tool, torque wrench, aids for markings