



LINK-SEAL® W

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



FIELDS OF APPLICATION

Suitable for applications in the drinking water sector

MATERIAL

Material type: EPDM-Rubber

Shore hardness: Shore A 50 ° ±5

Pressure plates: glass fibre reinforced polyamide

Bolts: A 4-70 Stainless Steel



PROPERTIES

Temperature range: -40 °C to + 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

PROPERTIES

- 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

FIELDS 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

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 Kompakt Temp or Kompakt Super Soft is recommended.



NOTES

- 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).

SUITABLE ACCESSORIES

- PipeX FZH
- ProteX Epoxy Resin
- ProteX Core Hole Sealing



CERTIFICATES

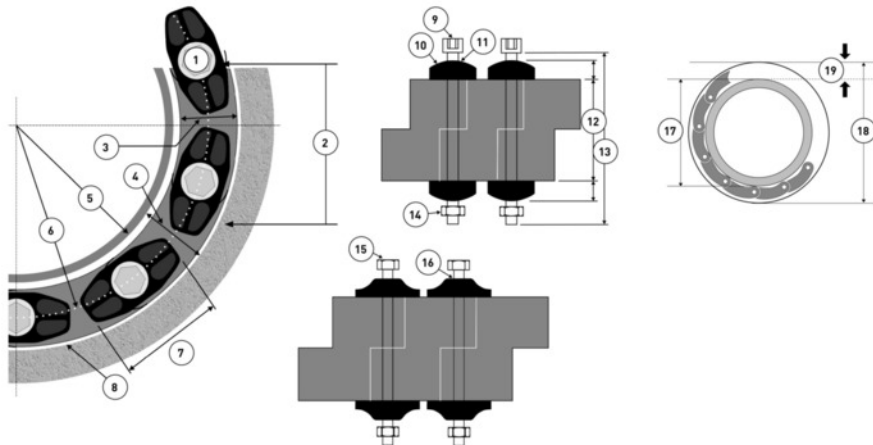
TEXT

- ZERTIFIKAT_ISO_9001_2015
- AEO-CERTIFICATE Authorized Economic Operator "AEO (customs simplification)" LRQA Deutschland GmbH: Witness Pressure Test for „Wall Penetration Seal, Type LINK-SEAL® Modular Seal”, (Certificates No. PRJ11100530095-1): Lloyd's Register: "Pressure Test for Wall Penetration Seal, Type LINK-SEAL® Modular Seal"; (Certificate No: APE 0409369/1): TÜV certificate and reports: Production facilities audit (annual), Technical report DDA4/118/94 Component testing of a modular seal: FHRK quality seal: FHRK test specification GE 101 seals (test report no. G 30 322-6-2) Original LINK-SEAL® Modular Seal type C / type S316: FM Approvals: Original LINK-SEAL® T Modular Seal (Certificate No. 3040658): WRAS: Material approval: ACS: Certificate of sanitary conformity: Pressure plate testing: Material testing DVGW W270; KTW: Sealing element: Material testing DVGW W270; UBA ELL: Radon tight: Test report Dr. Joachim Kemski, Radon tight 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	9 Allen head bolt	17 d = Medium pipe OD
2 Arc length	10 Pressure plate	18 D = Wall sleeve ID
3 Thickness non-tensioned	11 Compression assist boss	19 Annular space
4 Annular space	12 Height sealing element	
5 Outer diameter pipe	13 Total height element	
6 Bolt pitch circle	14 Hexagon nut	
7 Longer pressure plate	15 Allen head bolt (LS 325 & LS 360-700)	
8 ID Sleeve, casing pipe or core hole	16 Steel washers (LS 325 & LS 360-700)	



TYPE SELECTION

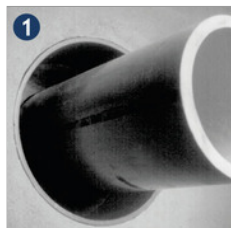
Article No.	Size	Suitable for core drilling	Suitable for carrier pipe OD from - to	Number of segments for core drilled hole	GTIN
2-025-00510	LS 200	80 mm	48 - 53 mm	8	4062987010140
		100 mm	68 - 75 mm	9	
		125 mm	95 - 100 mm	12	
		150 mm	118 - 125 mm	14	
2-025-00511	LS 275	50 mm	10 - 18 mm	4	4062987010157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



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	
2-025-00523	LS 525	350 mm	223 - 239 mm	9	4062987010270
		400 mm	273 - 289 mm	11	
		450 mm	327 - 339 mm	12	
		500 mm	373 - 389 mm	14	
		600 mm	473 - 489 mm	17	
2-025-00524	LS 575	250 mm	134 - 154 mm	8	4062987010287
		300 mm	184 - 204 mm	10	
		350 mm	234 - 254 mm	12	
		400 mm	284 - 304 mm	14	
		450 mm	335 - 354 mm	16	
		500 mm	385 - 400 mm	18	
2-025-00525	LS 625	400 mm	204 - 234 mm	9	4062987010294
		450 mm	254 - 265 mm	10	
		500 mm	304 - 334 mm	12	
		600 mm	404 - 434 mm	15	
2-025-00526	LS 650	350 mm	182 - 210 mm	8	4062987010300
		400 mm	234 - 255 mm	9	
		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