



LINK-SEAL® BC

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



FIELDS OF APPLICATION

Particularly soft rubber, especially suitable for plastic pipes. Use in normal atmosphere, water or humidity. Suitable for electrical isolation and cathodic corrosion protection.

MATERIAL

Material type: EPDM-Rubber

Shore hardness: Shore A 40° ±5

Pressure plates: glass fibre reinforced polyamide

Bolts: galvanized



PROPERTIES

Temperature range: -40 °C bis + 80 °C

UV-resistant: Yes

Pressure-tight: 3 bar

Color: blue

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

SIZE

LS 200 bis LS 700



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

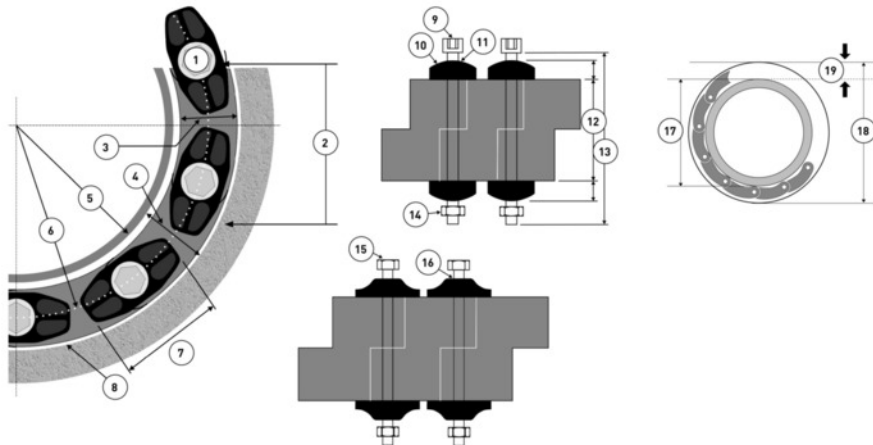
TEXT

- 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

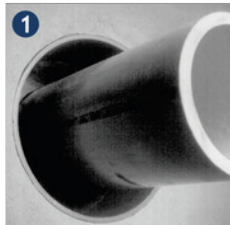
Article No.	Size	Suitable for core drilling	Suitable for carrier pipe OD from - to	Number of segments for core drilled hole	GTIN
2-025-00300	LS 200	80 mm	48 - 53 mm	7	4062987009915
		100 mm	68 - 75 mm	9	
		125 mm	95 - 100 mm	12	
		150 mm	118 - 125 mm	14	
2-025-00309	LS 265	100 mm	62 - 68 mm	6	4062987000073
		125 mm	87 - 93 mm	8	
		150 mm	112 - 118 mm	10	
2-025-00301	LS 275	50 mm	10 - 18 mm	4	4062987009922
		80 mm	40 - 48 mm	6	
		100 mm	55 - 64 mm	8	
		125 mm	87 - 90 mm	13	
2-025-00302	LS 300	100 mm	55 - 64 mm	6	4062987009939
		125 mm	80 - 89 mm	8	
2-025-00310	LS 310	150 mm	105 - 114 mm	7	4062987010003
		200 mm	155 - 164 mm	10	
		300 mm	255 - 264 mm	15	
		350 mm	307 - 314 mm	18	
2-025-00303	LS 315	100 mm	48 - 57 mm	6	4062987009946
		125 mm	73 - 82 mm	8	
2-025-00304	LS 325	250 mm	190 - 203 mm	9	4062987009953
		300 mm	240 - 253 mm	11	
		350 mm	294 - 303 mm	13	
		400 mm	340 - 353 mm	15	
		450 mm	390 - 403 mm	17	
		500 mm	440 - 453 mm	19	
		600 mm	540 - 553 mm	23	
2-025-00058	LS 340	100 mm	32 - 45 mm	5	4062987009236
		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	
2-025-00059	LS 360BC	125 mm	42 - 61 mm	5	4062987009243
		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	
2-025-00305	LS 400	250 mm	158 - 177 mm	7	4062987009960
		400 mm	308 - 327 mm	12	
		450 mm	358 - 377 mm	14	
		500 mm	408 - 427 mm	15	
		600 mm	508 - 527 mm	19	
2-025-00060	LS 410BC	150 mm	58 - 76 mm	5	4062987009250
		200 mm	103 - 124 mm	7	
		250 mm	178 - 192 mm	12	
		300 mm	208 - 226 mm	14	
		350 mm	253 - 274 mm	14	
2-025-00306	LS 425	350 mm	276 - 293 mm	11	4062987009977
		400 mm	326 - 341 mm	12	
		450 mm	376 - 393 mm	14	
		500 mm	426 - 443 mm	16	
		600 mm	526 - 543 mm	19	
		250 mm	178 - 192 mm	7	



Article No.	Size	Suitable for core drilling	Suitable for carrier pipe OD from - to	Number of segments for core drilled hole	GTIN
2-025-00277	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	4062987009885
2-025-00307	LS 475	150 mm 200 mm 250 mm 350 mm 400 mm 450 mm 600 mm	53 - 67 mm 103 - 117 mm 153 - 163 mm 253 - 267 mm 303 - 317 mm 355 - 367 mm 503 - 509 mm	5 7 9 14 16 19 25	4062987009984
2-025-00308	LS 500	300 mm 350 mm 400 mm 450 mm 500 mm 600 mm	157 - 173 mm 207 - 229 mm 264 - 279 mm 307 - 329 mm 357 - 379 mm 457 - 479 mm	7 9 10 12 14 17	4062987009991
2-025-00061	LS 525BC	350 mm 400 mm 450 mm 500 mm 600 mm	223 - 239 mm 273 - 289 mm 327 - 339 mm 373 - 389 mm 473 - 489 mm	9 11 12 14 17	4062987009267
2-025-00062	LS 575	250 mm 300 mm 350 mm 400 mm 450 mm 500 mm	134 - 154 mm 184 - 204 mm 234 - 254 mm 284 - 304 mm 335 - 354 mm 385 - 400 mm	8 10 12 14 16 18	4062987009274
2-025-00260	LS 625	400 mm 450 mm 500 mm 600 mm	204 - 234 mm 254 - 265 mm 304 - 334 mm 404 - 434 mm	9 10 12 15	4062987009847
2-025-00279	LS 650	350 mm 400 mm 450 mm 500 mm 600 mm	182 - 210 mm 234 - 255 mm 285 - 311 mm 335 - 359 mm 436 - 457 mm	8 9 11 12 15	4062987009908
2-025-00470	LS 700	450 mm 500 mm 600 mm	235 - 256 mm 285 - 306 mm 385 - 406 mm	7 8 10	4062987010126



 **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