LINK-SEAL® C

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

AREA OF APPLICATION
Use in normal atmosphere, water or humidity. Suitable for electrical isolation and cathodic corrosion protection.

MATERIAL
Material type: EPDM Rubber
Shore hardness: Shore A 50 ° ±5
Pressure plates: glass fibre reinforced polyamide
Bolts: galvanized

PROPERTIES
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 to 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

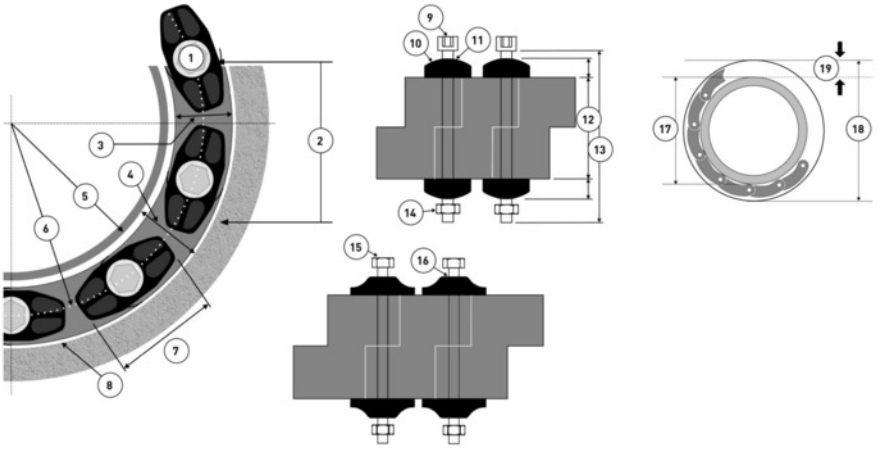
TEXT

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



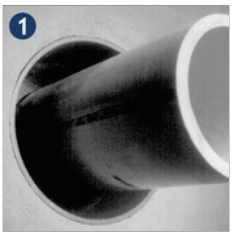
1 Hexagon nut
2 Arc length
3 Thickness non-tensioned
4 Annular space
5 Outer diameter pipe
6 Bolt pitch circle
7 Longer pressure plate
8 ID Sleeve, casing pipe or core hole
9 Allen head bolt
10 Pressure plate
11 Compression assist boss
12 Height sealing element
13 Total height element
14 Hexagon nut
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

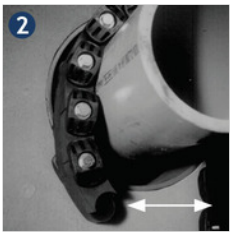
Article No.	Size	Suitable for core drilling	Suitable for carrier pipe OD from - to	Number of segments for core drilled hole	GTIN
2-025-00001	LS 200	80 mm 100 mm 125 mm 150 mm	48 - 53 mm 68 - 75 mm 95 - 100 mm 118 - 125 mm	7 9 12 14	4062987008895
2-025-00017	LS 265	100 mm 125 mm 150 mm	62 - 68 mm 87 - 93 mm 112 - 118 mm	6 8 10	4062987009052
2-025-00010	LS 275	50 mm 80 mm	10 - 18 mm 40 - 48 mm	4 8	4062987008987
2-025-00002	LS 300	100 mm 125 mm	55 - 64 mm 80 - 89 mm	6 8	4062987008901
2-025-00018	LS 310	150 mm 200 mm 300 mm 350 mm	105 - 114 mm 155 - 164 mm 255 - 264 mm 307 - 314 mm	7 10 15 18	4062987009069
2-025-00012	LS 315	100 mm 125 mm	48 - 57 mm 73 - 82 mm	6 8	4062987009007
2-025-00003	LS 325	250 mm 300 mm 350 mm 400 mm 450 mm 500 mm 600 mm	190 - 203 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	4062987008918
2-025-00004	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	4062987008925
2-025-00008	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	4062987008963
2-025-00009	LS 400	250 mm 400 mm 450 mm 500 mm 600 mm	158 - 177 mm 308 - 327 mm 358 - 377 mm 408 - 427 mm 508 - 527 mm	7 12 14 15 19	4062987008970
2-025-00011	LS 410	150 mm 200 mm 300 mm 350 mm	58 - 76 mm 103 - 124 mm 208 - 226 mm 253 - 274 mm	5 7 12 14	4062987008994
2-025-00005	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	4062987008932
2-025-00015	LS 440	300 mm 400 mm 450 mm 500 mm 600 mm	190 - 210 mm 292 - 310 mm 345 - 356 mm 390 - 403 mm 490 - 503 mm	8 11 13 14 17	4062987009038

Article No.	Size	Suitable for core drilling	Suitable for carrier pipe OD from - to	Number of segments for core drilled hole	GTIN
2-025-00006	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	4062987008949
2-025-00007	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	4062987008956
2-025-00013	LS 525	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	4062987009014
2-025-00014	LS 575	250 mm 300 mm 350 mm 400 mm 450 mm 500 mm	134 - 154 mm 184 - 204 mm 234 - 244 mm 284 - 304 mm 335 - 354 mm 385 - 400 mm	10 12 14 16 18 8	4062987009021
2-025-00215	LS 615	450 mm	266 - 286 mm	7	4062987009786
2-025-00016	LS 650	350 mm 400 mm 450 mm 500 mm 600 mm	182 - 210 mm 234 - 254 mm 285 - 311 mm 335 - 359 mm 436 - 457 mm	8 9 11 12 15	4062987009045

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 nutjust enough so links move freelytowards and away from each other connect both ends of belt.

3
Check to be sure bolt heads are facingthe installer. Extra slack or sag is normal. Do not remove links if extra slack exists. Note: On smaller diameter pipes, linksmay 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