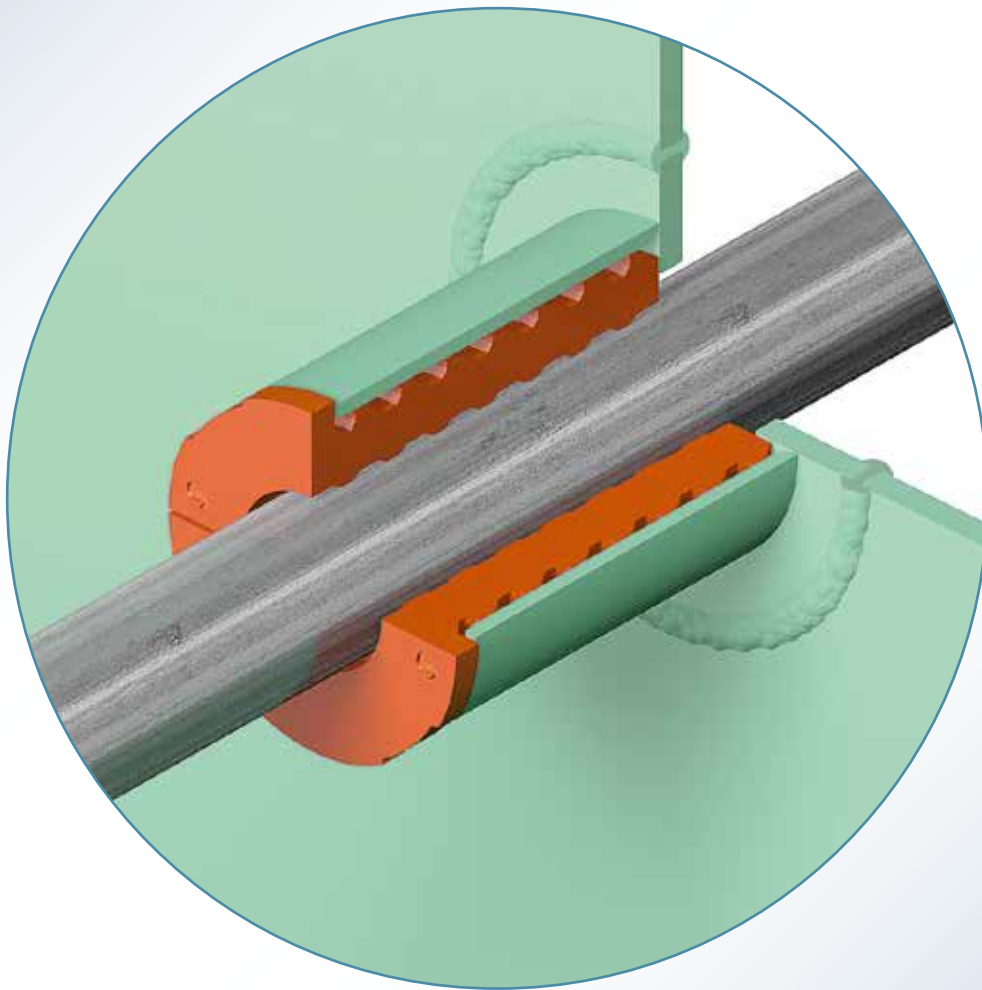




INSTALLATION INSTRUCTIONS

SLIPSIL® XL-120

SEALING PLUGS FOR PIPE/CABLE DUCTS



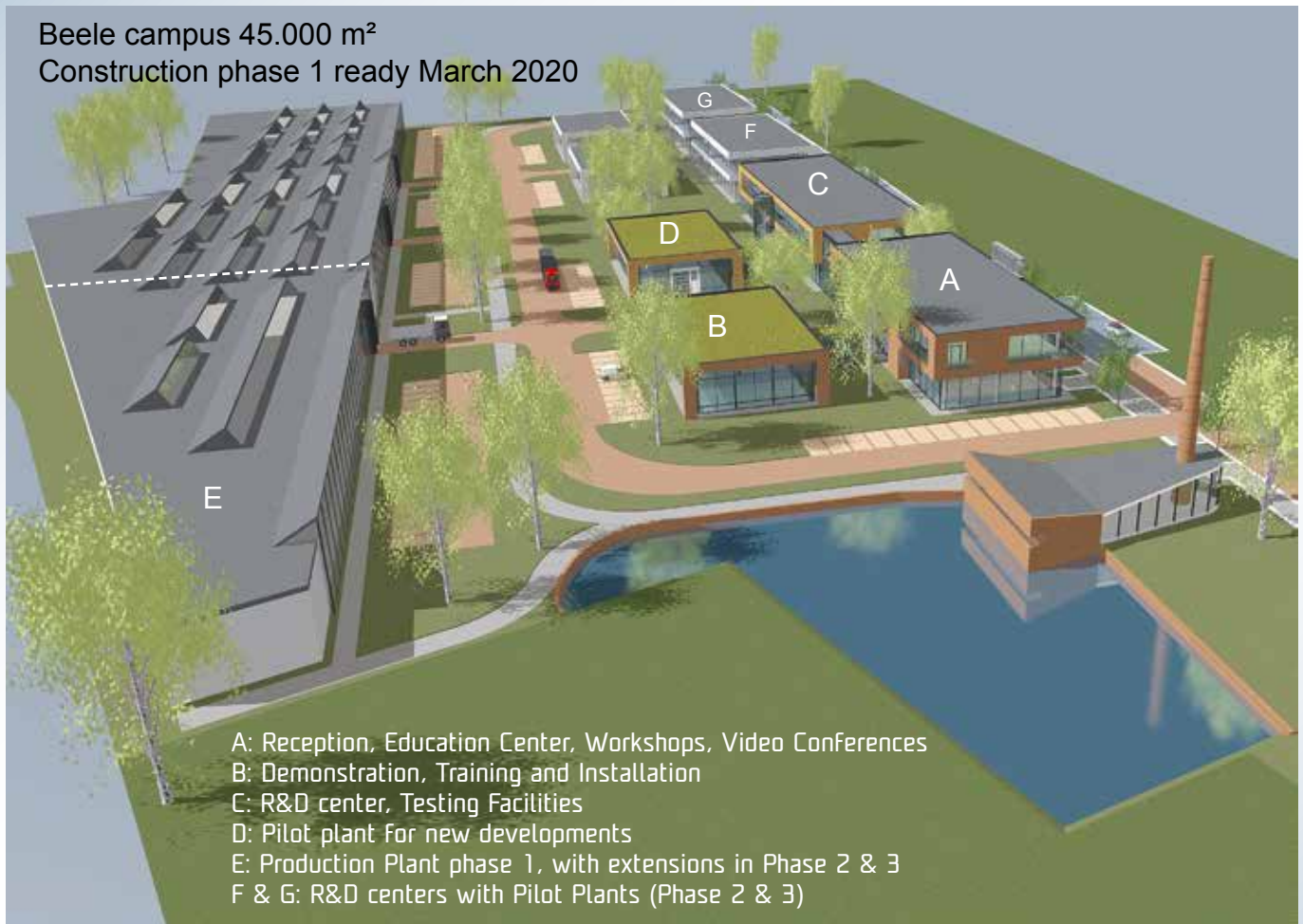
slipsil®
XL-120



SEALING VALLEY

KNOWLEDGE TRANSFER, EDUCATION AND TRAINING

Beele campus 45.000 m²
Construction phase 1 ready March 2020



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Edition

: February 2020

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Research & Development

: BEELE Engineering BV, Aalten, the Netherlands.

Note

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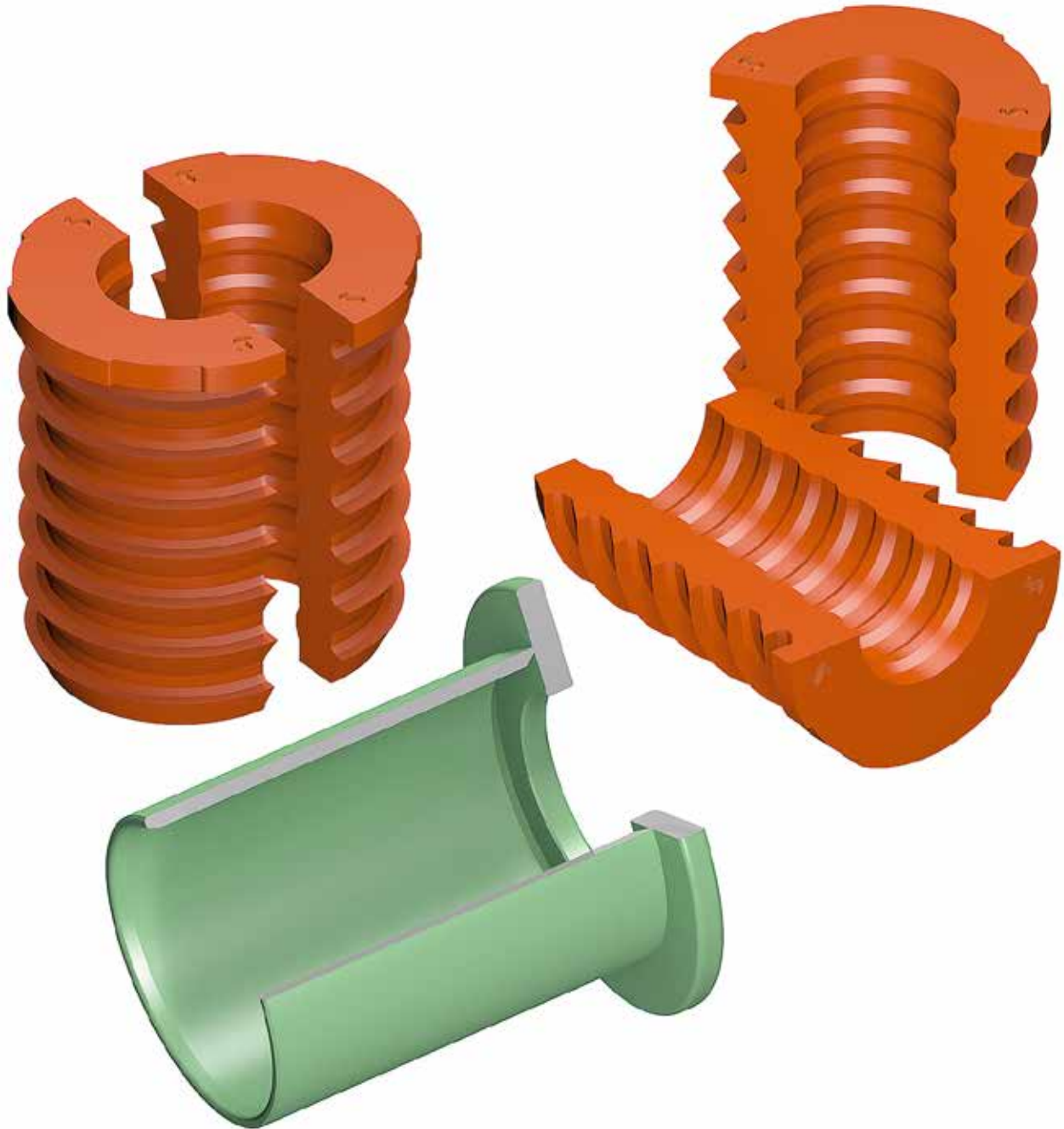
®

: ACTIFOAM, AQUASTOP, BEEBLOCK, BEEBOND, BEELE, BEELE WE CARE, BEESEAL, CONDUCTION, CONTITITE, CONTROFIL, CRUSHER, CRUSHNOF, CSD, CSD THE SIMPLE SEAL SYSTEM, DRIFIL, DYNATITE, FIRAQUA, FIREQUAKE, FIRSTO, FISSIC, FIWA, FYLLOFYS, GLANDMOD, LEAXEAL, MULTI-ALL-MIX, NOFIRNO, profiles NOFIRNO gaskets, RAPID TRANSIT SYSTEM, RIACNOF, RISE, RISWAT, SEALING VALLEY, \$, SLIPSIL, flanges SLIPSIL plugs, ULEPSI, XATTAX and YFESTOS are registered trade marks of BEELE Engineering.

brochure code

: installation SLIPSIL XL-120

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



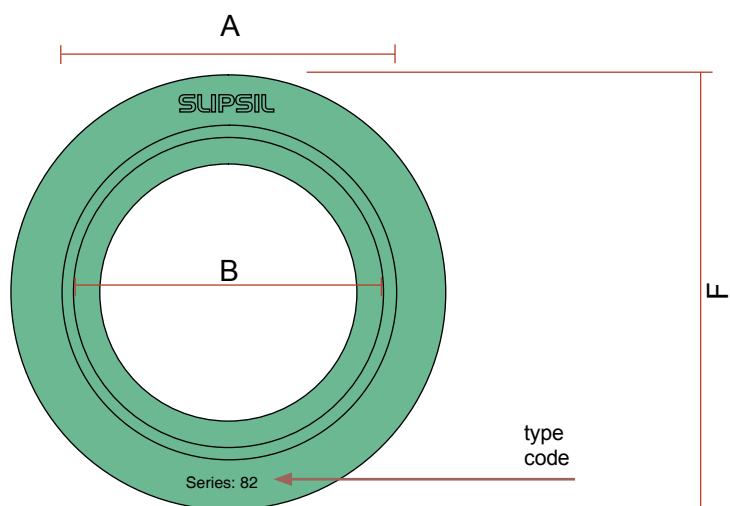
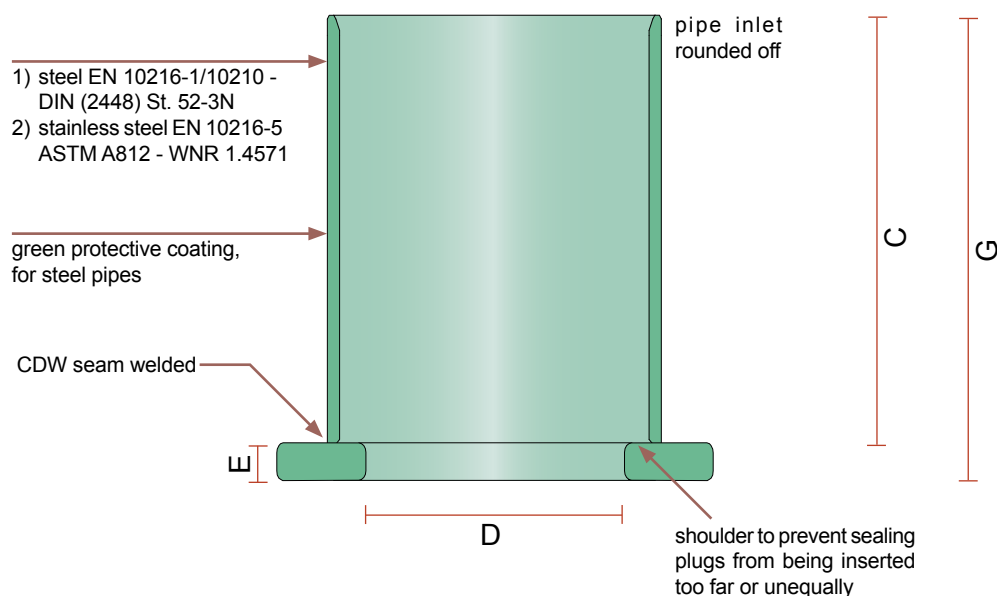
The SLIPSIL® XL-120 sealing system consists of SLIPSIL XL-120 sealing plugs with a length of 120 mm and SLIPSIL XL-120 conduit sleeves with a length of 113 mm with a 10 mm thick shoulder/welding flange at the back of the conduit sleeve. The system has been developed as an alternative for the combination SLIPSIL®/DYNATITE® plugs. Installation of one SLIPSIL XL-120 sealing plug instead of two different plug types. The mechanical stability and tightness ratings are exceptionally high due to the precise fitting parts. No corrosion inside the transits, and a service life exceeding 20 years, guarantee for long term functionality with regards to fire and water tightness.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES

cable/ pipe diameter	plug type	article number	cable/ pipe diameter	plug type	article number	cable/ pipe diameter	plug type	article number
blind	41/0 SL XL	44.1000	blind	100/0 SL XL	44.2800	5-6	41/2x5-6 SL XL	44.1031
5-6	41/5-6 SL XL	44.1005	40-42	100/40-42 SL XL	44.2820	6-7	41/2x6-7 SL XL	44.1032
6-7	41/6-7 SL XL	44.1006	42-44	100/42-44 SL XL	44.2821			
7-8	41/7-8 SL XL	44.1007	44-46	100/44-46 SL XL	44.2822	5-6	41/3x5-6 SL XL	44.1041
8-9	41/8-9 SL XL	44.1008	46-48	100/46-48 SL XL	44.2823			
9-10	41/9-10 SL XL	44.1009	48-50	100/48-50 SL XL	44.2824	5-6	41/4x5-6 SL XL	44.1051
10-11	41/10-11 SL XL	44.1010	50-52	100/50-52 SL XL	44.2825			
11-12	41/11-12 SL XL	44.1011	52-54	100/52-54 SL XL	44.2826	5-6	41/5x5-6 SL XL	44.1061
12-14	41/12-14 SL XL	44.1012	54-56	100/54-56 SL XL	44.2827			
14-16	41/14-16 SL XL	44.1013	56-58	100/56-58 SL XL	44.2828	6-7	55/5x6-7 SL XL	44.1461
16-18	41/16-18 SL XL	44.1014	58-60	100/58-60 SL XL	44.2829	7-8	55/5x7-8 SL XL	44.1462
18-20	41/18-20 SL XL	44.1015	60-62	100/60-62 SL XL	44.2830	6-7	55/2x6-7 SL XL	44.1431
20-22	41/20 SL XL	44.1016	62-64	100/62-64 SL XL	44.2831	7-8	55/2x7-8 SL XL	44.1432
			64-66	100/64 SL XL	44.2832	8-9	55/2x8-9 SL XL	44.1433
blind	55/0 SL XL	44.1400				9-10	55/2x9-10 SL XL	44.1434
6-7	55/6-7 SL XL	44.1405	blind	125/0 SL XL	44.3600	10	55/2x10 SL XL	44.1435
7-8	55/7-8 SL XL	44.1406	60-62	125/60-62 SL XL	44.3630			
8-9	55/8-9 SL XL	44.1407	62-64	125/62-64 SL XL	44.3631	6-7	55/3x6-7 SL XL	44.1441
9-10	55/9-10 SL XL	44.1408	64-66	125/64-66 SL XL	44.3632	7-8	55/3x7-8 SL XL	44.1442
10-12	55/10-12 SL XL	44.1409	66-68	125/66-68 SL XL	44.3633			
12-14	55/12-14 SL XL	44.1410	68-70	125/68-70 SL XL	44.3634	6-7	55/4x6-7 SL XL	44.1451
14-16	55/14-16 SL XL	44.1411	70-72	125/70-72 SL XL	44.3635	7-8	55/4x7-8 SL XL	44.1452
16-18	55/16-18 SL XL	44.1412	72-74	125/72-74 SL XL	44.3636			
18-20	55/18-20 SL XL	44.1413	74-76	125/74-76 SL XL	44.3637	6-7	55/5x6-7 SL XL	44.1461
20-22	55/20-22 SL XL	44.1414	76-78	125/76-78 SL XL	44.3638	7-8	55/5x7-8 SL XL	44.1462
22-24	55/22-24 SL XL	44.1415	78-80	125/78-80 SL XL	44.3639			
24-26	55/24-26 SL XL	44.1416	80-82	125/80-82 SL XL	44.3640	11-12	70/2x11-12 SL XL	44.2031
26-28	55/26-28 SL XL	44.1417	82-84	125/82-84 SL XL	44.3641	12-13	70/2x12-13 SL XL	44.2032
28-30	55/28 SL XL	44.1418	84-86	125/84-86 SL XL	44.3642	13-14	70/2x13-14 SL XL	44.2033
			86-88	125/86-88 SL XL	44.3643	14-15	70/2x14-15 SL XL	44.2034
blind	70/0 SL XL	44.2000	88-90	125/88 SL XL	44.3644	15	70/2x15 SL XL	44.2035
20-22	70/20-22 SL XL	44.2014						
22-24	70/22-24 SL XL	44.2015	blind	150/0 SL XL	44.4000	8-9	70/3x8-9 SL XL	44.2041
24-26	70/24-26 SL XL	44.2016	88-90	150/88-90 SL XL	44.4020	9-10	70/3x9-10 SL XL	44.2042
26-28	70/26-28 SL XL	44.2017	90-92	150/90-92 SL XL	44.4021			
28-30	70/28-30 SL XL	44.2018	92-94	150/92-94 SL XL	44.4022	8-9	70/4x8-9 SL XL	44.2051
30-32	70/30-32 SL XL	44.2019	94-96	150/94-96 SL XL	44.4023	9-10	70/4x9-10 SL XL	44.2052
32-34	70/32-34 SL XL	44.2020	96-98	150/96-98 SL XL	44.4024			
34-36	70/34-36 SL XL	44.2021	98-100	150/98-100 SL XL	44.4025	8-9	70/5x8-9 SL XL	44.2061
36-38	70/36-38 SL XL	44.2022	100-102	150/100-102 SL XL	44.4026	9-10	70/5x9-10 SL XL	44.2062
38-40	70/38-40 SL XL	44.2023	102-104	150/102-104 SL XL	44.4027			
40-42	70/40-42 SL XL	44.2024	104-106	150/104-106 SL XL	44.4028	16-17	82/2x16-17 SL XL	44.2441
42-44	70/42 SL XL	44.2025	106-108	150/106-108 SL XL	44.4029	17-18	82/2x17-18 SL XL	44.2442
			108-110	150/108-110 SL XL	44.4030	18-19	82/2x18-19 SL XL	44.2443
blind	82/0 SL XL	44.2400	110-112	150/110-112 SL XL	44.4031	19-20	82/2x19-20 SL XL	44.2444
28-30	82/28-30 SL XL	44.2418	112-114	150/112-114 SL XL	44.4032	20	82/2x20 SL XL	44.2445
30-32	82/30-32 SL XL	44.2419	114	150/114 SL XL	44.4033			
32-34	82/32-34 SL XL	44.2420				11-12	82/3x11-12 SL XL	44.1451
34-36	82/34-36 SL XL	44.2421				12-13	82/3x12-13 SL XL	44.1452
36-38	82/36-38 SL XL	44.2422						
38-40	82/38-40 SL XL	44.2423				11-12	82/4x11-12 SL XL	44.1461
40-42	82/40-42 SL XL	44.2424				12-13	82/4x12-13 SL XL	44.1462
42-44	82/42-44 SL XL	44.2425						
44-46	82/44-46 SL XL	44.2426				11-12	82/5x11-12 SL XL	44.1471
46-48	82/46-48 SL XL	44.2427				12-13	82/5x12-13 SL XL	44.1752
48-50	82/48-50 SL XL	44.2428						
50-52	82/50-52 SL XL	44.2429						
52-54	82/52-54 SL XL	44.2430						
54	82/54 SL XL	44.2431						

NOTE: SLIPSIL XL-120 plugs are available in the same types as the regular SLIPSIL sealing plugs. Article number 44.XXXX

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



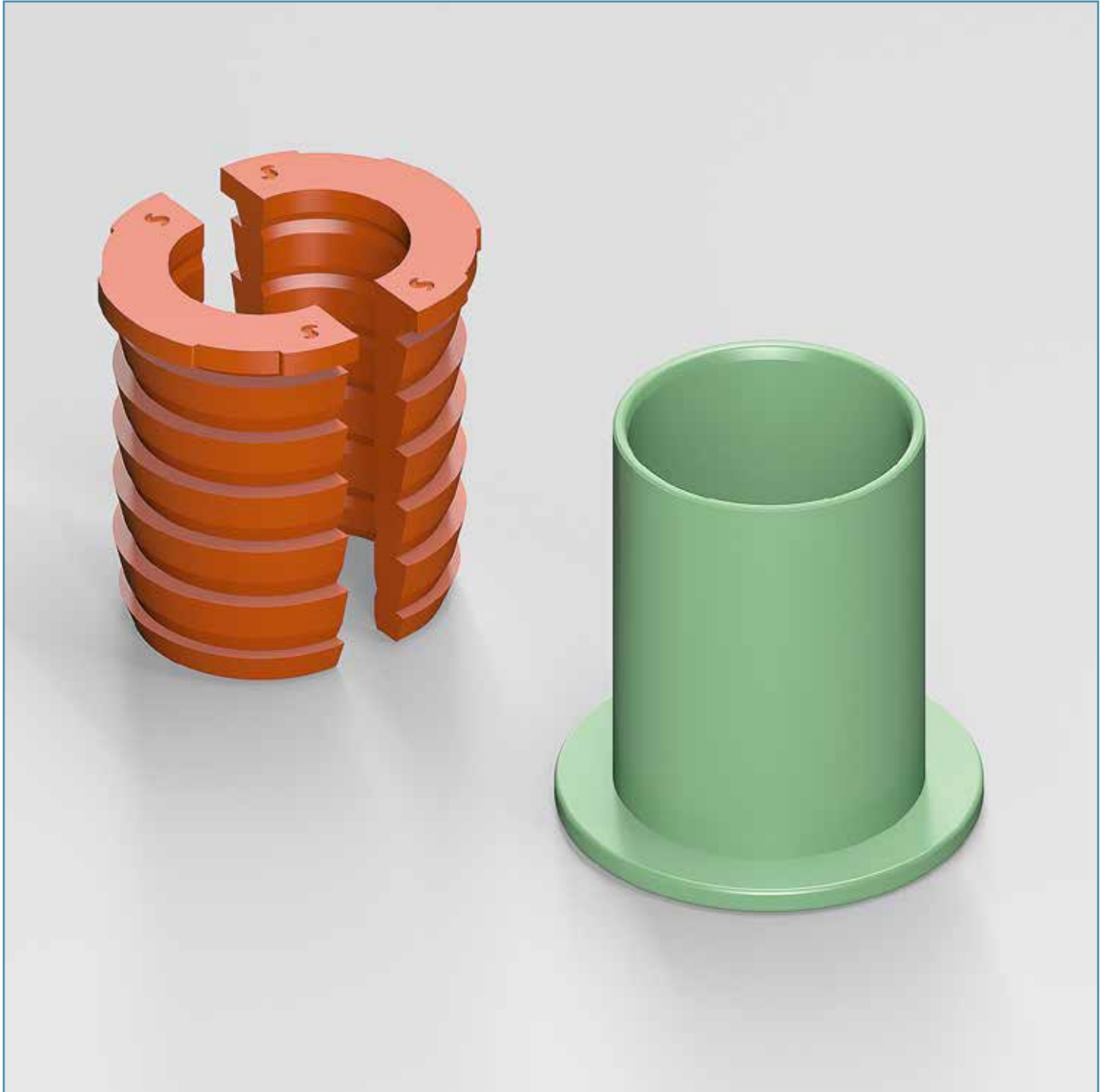
CONDUIT SLEEVES WITH SHOULDER

SL 41 XL	max. OD ducted pipe 20
SL 55 XL	max. OD ducted pipe 28
SL 70 XL	max. OD ducted pipe 42
SL 82 XL	max. OD ducted pipe 54
SL 100 XL	max. OD ducted pipe 64
SL 125 XL	max. OD ducted pipe 88.9
SL 150 XL	max. OD ducted pipe 114.3

All dimensions in mm

type	A	B	C	D	E	F	G	art. no. steel	art. no. stainless
SL 41 WS XL	48.5	41	113	25	10	75	123	60.7872	60.7882
SL 55 WS XL	62.5	55	113	34	10	90	123	60.7873	60.7883
SL 70 WS XL	78	70	113	50	10	105	123	60.7874	60.7884
SL 82 WS XL	90	82	113	60	10	115	123	60.7875	60.7885
SL100 WS XL	108	100	113	75	10	135	123	60.7876	60.7886
SL 125 WS XL	134	125	113	100	10	160	123	60.7877	60.7887
SL 150 WS XL	159	150	113	125	10	185	123	60.7878	60.7888

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



The SLIPSIL® XL-120 sealing system consists of SLIPSIL® XL-120 sealing plugs and fitting SLIPSIL® XL-120 conduit sleeves. The fitting SLIPSIL® conduit sleeves are vital for an optimum functionality with regard to gas and water tightness. The inner dimensions of the sleeves are exactly milled for a perfect fit of the sealing plugs. This means that the plugs have to cope only with the tolerances of the ducted pipe/cable. Furthermore, the inlet of the conduit sleeve is rounded, which allows a smooth insertion of the plugs, and also prevents damage to the plugs. A shoulder inside the conduit sleeves prevents the plugs from being inserted too deep or unequally. The flange makes positioning and welding in the sleeves correctly and easier as well.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



The thickness of the welding flange is 10 mm to prevent tilting of the conduit sleeve or destroying the thinner wall conduit sleeves during welding. The SLIPSIL® XL-120 conduit sleeves are made from steel or stainless steel. Flange and sleeve are welded together by capacitor discharge welding and are thus protected against crevice corrosion. The stainless steel SLIPSIL® XL-120 conduit sleeves (1.4571) are passivated and have been tested with a salt fog test for 20 years sea water resistance. The steel sleeves are made from steel EN 10216-1/10210 St. 52-3N. Fire, and water tightness ratings are improved with the SLIPSIL® XL-120 conduit sleeves. Maximum size is 150 mm ID.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



The SLIPSIL® XL-120 conduit sleeve welded into the construction. The internal depth of the sleeve is 113 mm, equal to the length of the SLIPSIL® XL-120 sealing plug to be inserted into the conduit sleeve. The shoulder inside the conduit sleeve prevents the plug from being inserted too far, and the plug halves from being installed unequally. The front side of the conduit sleeve is milled off and smoothed to prevent the serrated profiles of the SLIPSIL® XL-120 sealing plug from being damaged. Damaging the serrated profiles on the outside of the sealing plug could easily lead to leaking. A coating is applied to prevent corrosion to the inside of the sleeve, which also makes insertion of the plug easier and optimizes tightness ratings.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



The pipe/cable has to be ducted straight and centrally through the SLIPSIL® XL-120 conduit sleeve. The shoulder inside the conduit sleeve prevents ducting of a pipe that is too large for the standard plug series. For larger pipe sizes and longer conduits, SLIPSIL® XL-120 conduit sleeves can be supplied as well. However, these pipes are not manufactured by capacitive discharge welding. For optimum performance, the SLIPSIL® XL-120 sealing system should be installed as a system, not as single components and can only be guaranteed as a sealing system. The design of the SLIPSIL® XL-120 plugs and the SLIPSIL® XL-120 conduit sleeves optimizes performance and ease of installation.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



Before starting the installation procedure, any dirt, oil residues or corrosion should be removed from the conduit sleeve and the surface of the ducted pipe. SLIPSIL® XL-120 sealing plugs are made from high grade NOFIRNO® rubber. The rubber forms a very smooth outer surface during vulcanization. Nevertheless, the engineered design of the serrated profiles is building up resistance during insertion of the SLIPSIL® XL-120 sealing plugs. The rubber is very flexible with an optimized hardness. It is absolutely important to lubricate the conduit sleeve on the inside before inserting the sealing plug. Treat the inside of the conduit sleeve using a brush over its full length and all around with CSD® lubricant.

INSTALLATION INSTRUCTIONS SLIPSIL[®] XL-120 SEALING PLUGS IN SLIPSIL[®] XL-120 CONDUIT SLEEVES



ARTICLE NUMBER 60.0900

Before installation of the sealing plug, check to ensure that the conduit sleeve is the correct size for the plug series being installed, and also whether the outer dimension of the ducted pipe is within the tolerances of the sealing plug. The inside surfaces of both segments of the SLIPSIL[®] XL-120 sealing plug are treated with CSD[®] lubricant. Also, the flat surfaces on the plug should be treated with the lubricant. Always use sufficient lubricant, which facilitates easy insertion of the plugs.

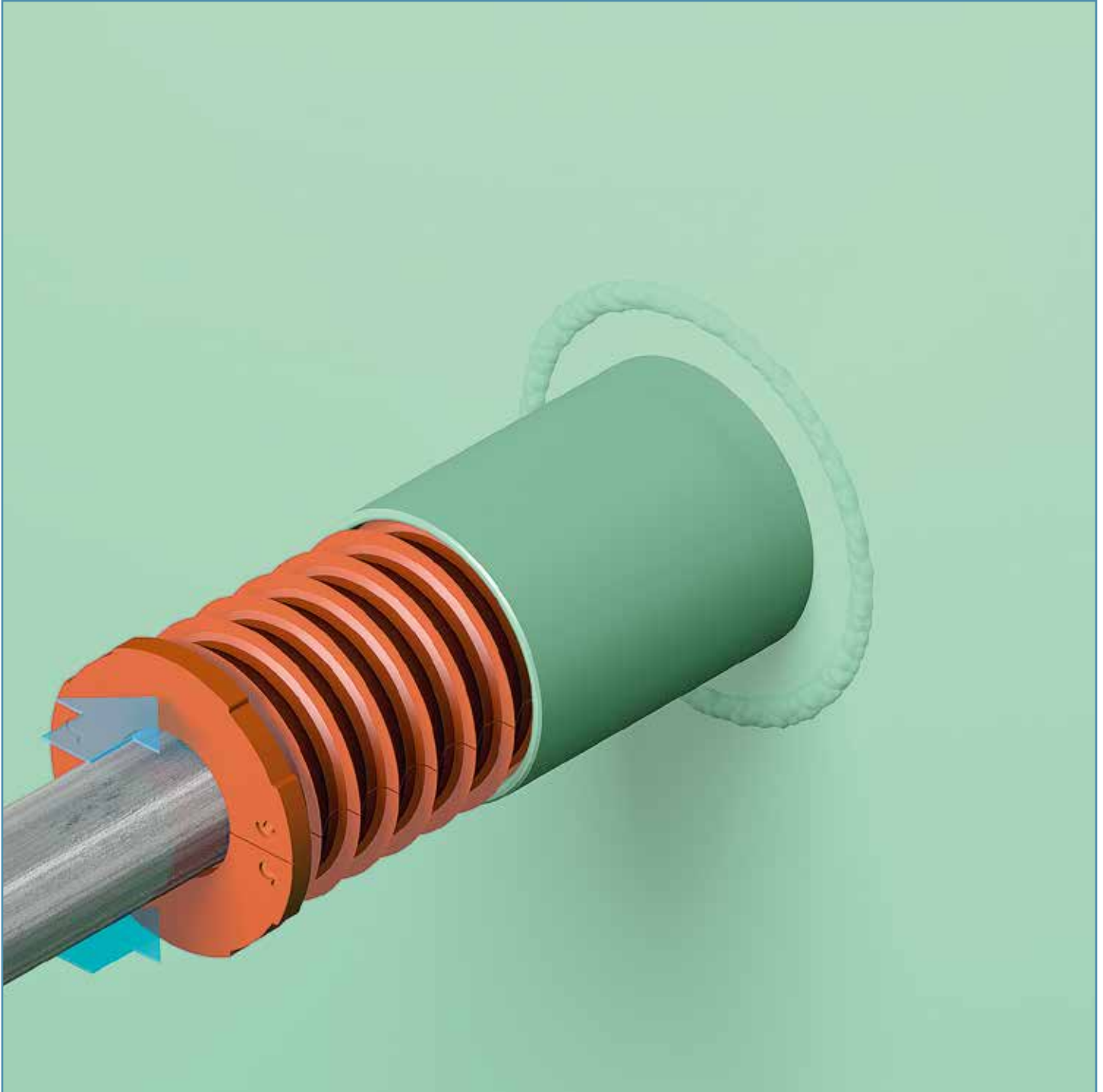
CSD[®] lubricant is an acid free, pharmaceutical petroleum jelly and will disappear after installation.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



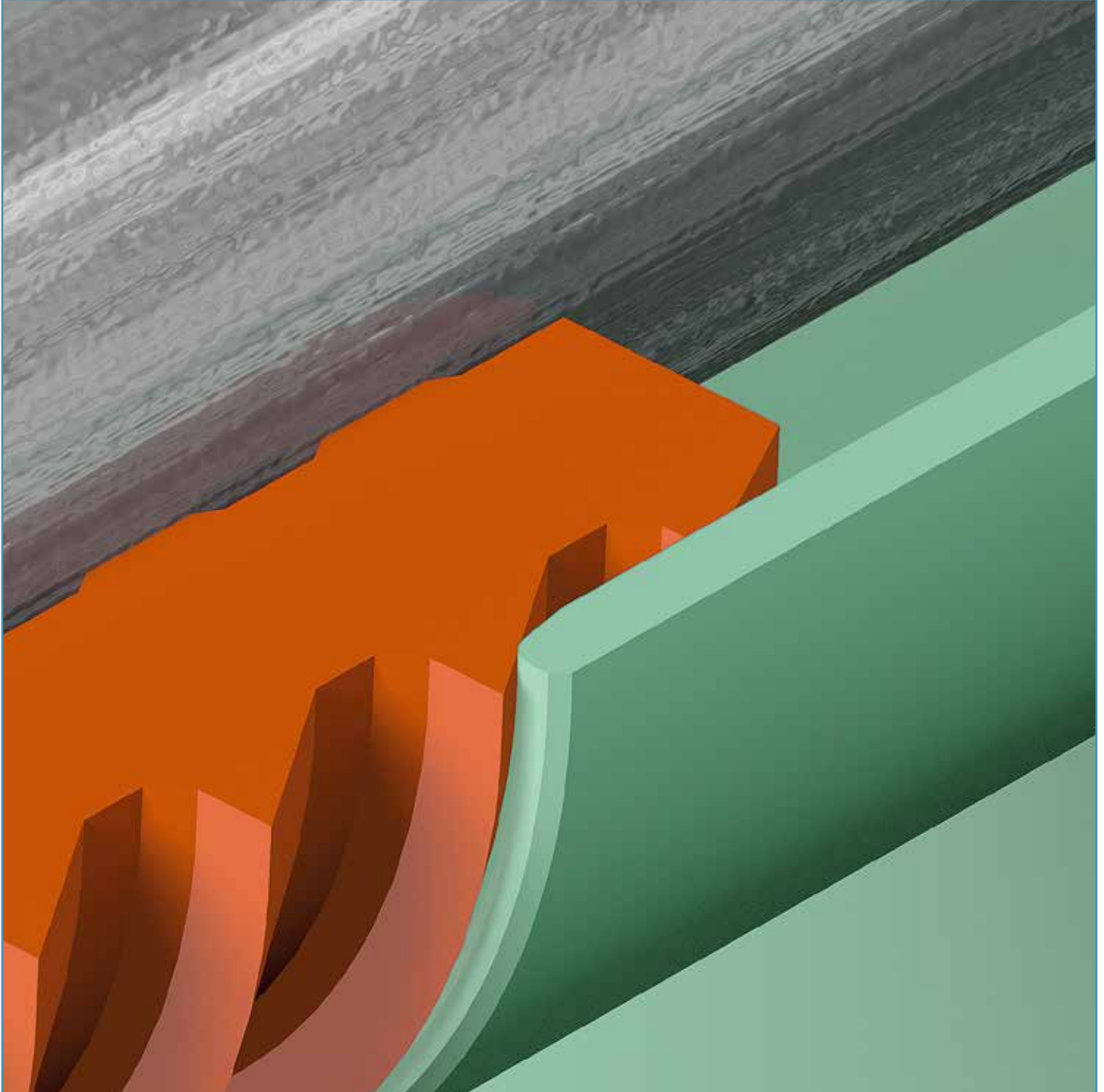
The segments of the SLIPSIL® XL-120 sealing plug are also treated with CSD® lubricant on the outside. Please refer to the Safety Data Sheet of the CSD® lubricant for more information.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



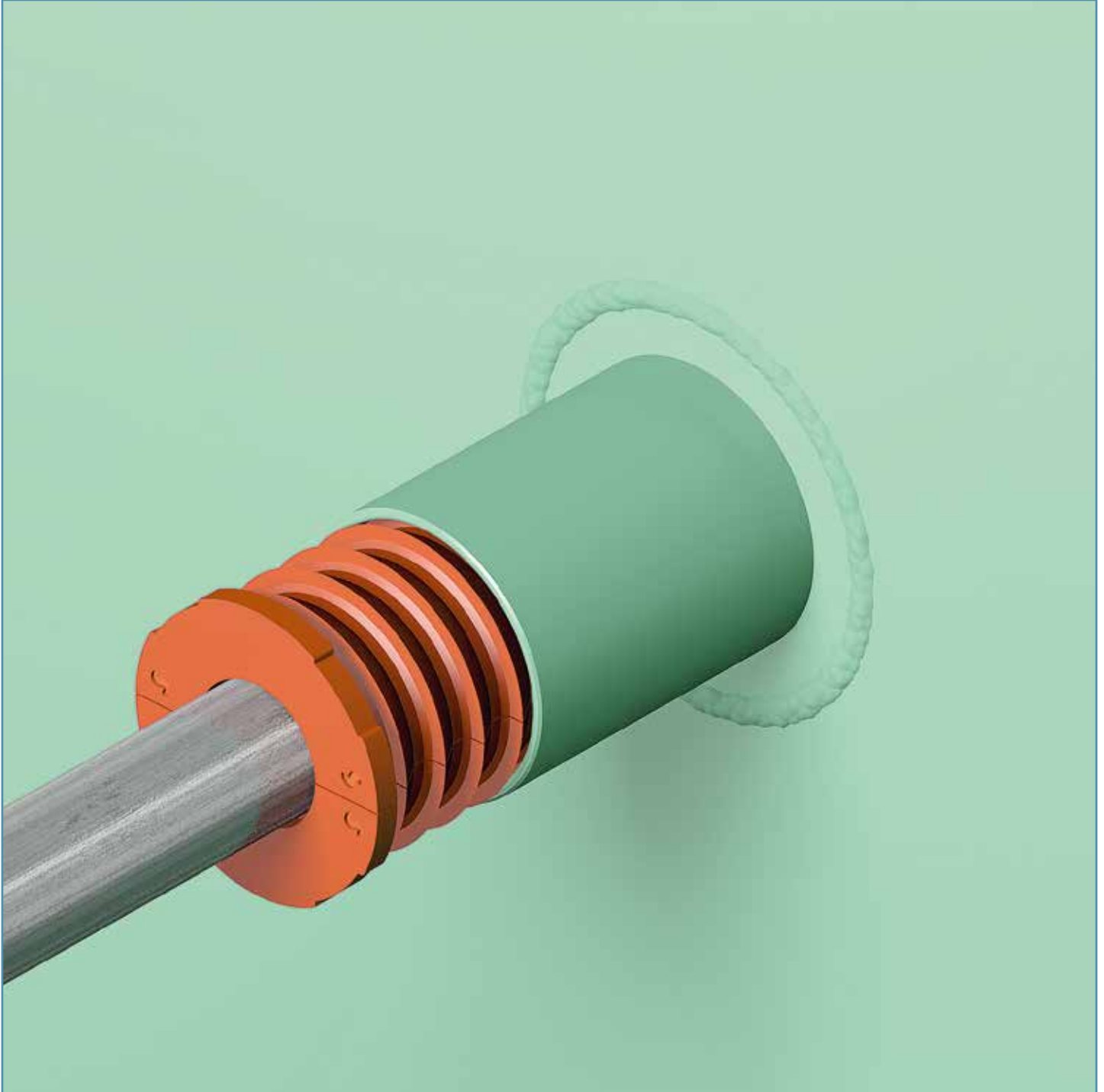
Both segments of the SLIPSIL® XL-120 sealing plug are placed around the ducted pipe and then pushed into the conduit sleeve as far as the first serration. The first serration is smaller than the other serrations to make this procedure easy.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



The front side of the conduit sleeve is bevelled to allow for a perfect sliding of the profiles during further insertion. In addition, the bevelling is designed for positioning the segments inside the conduit sleeve. The serration at the bottom of the plugs has a smaller diameter than the other serrations. For ease of installation, it is advisable to select SLIPSIL® XL-120 sealing plugs with sufficient wall thickness. Plugs with a very thin wall thickness are less easy to install.

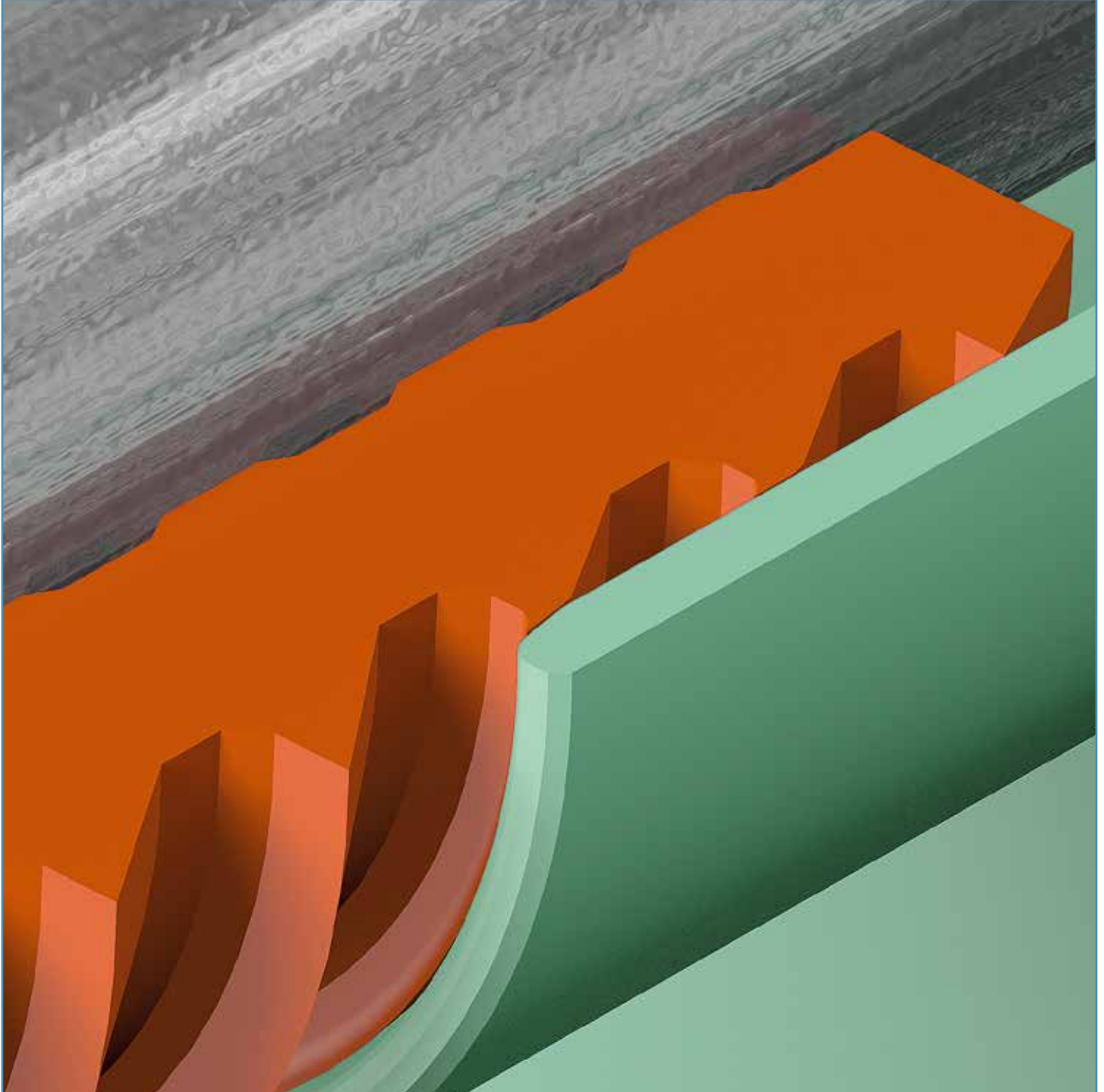
INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



Both segments of the SLIPSIL® XL-120 sealing plug are pushed by hand, serration by serration, further into the conduit sleeve. Push the plug in as far as possible in one try.

When the insertion is stopped, the serrated profiles will settle themselves immediately against the wall of the conduit sleeve. The resistance for further insertion will then be increased substantially. The resistance will be, of course, higher with larger plug sizes.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



The serrated profiles on the outside of the SLIPSIL® XL-120 sealing plugs are bent during insertion and flattened against the wall of the conduit sleeve. This creates surface resistance.

The inner ribs on the inside of the plugs are also reshaped during insertion and will obtain also a larger contact surface. As opposed to using regular steel pipes for the conduit sleeves, only the tolerances of the ducted pipe/cable have to be monitored if using the SLIPSIL® XL-120 conduit sleeves.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



Due to the length of the SLIPSIL® XL-120 sealing system, it might not be possible to completely insert the SLIPSIL® XL-120 plugs by hand.

In such a case, the SLIPSIL® XL-120 sealing plug can be tapped in using a hammer and a piece of wood. Use a flat piece of wood to prevent the flange of the plug from damage.

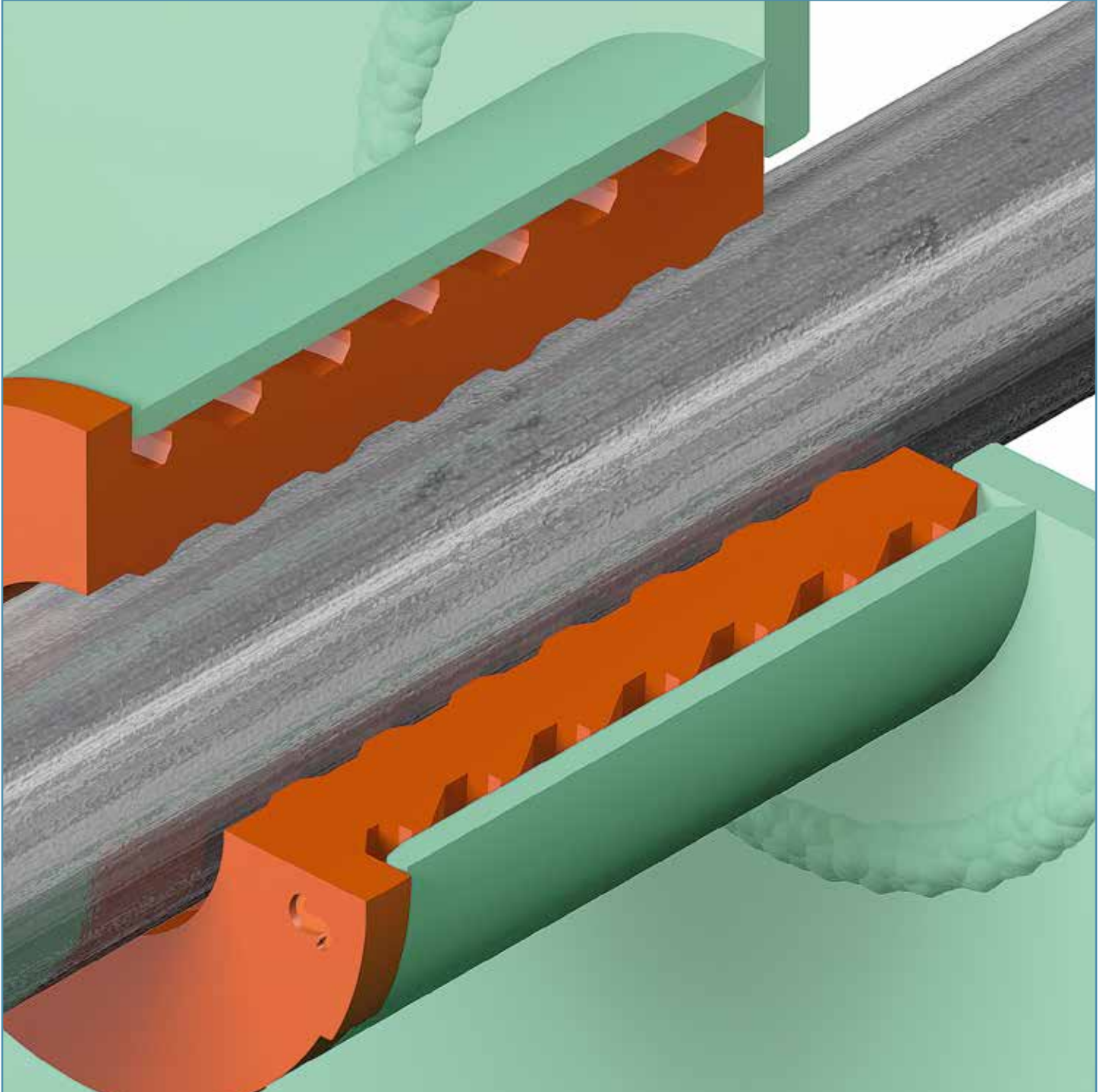
Tapping in further should be done serration by serration.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



The flanged edge of the SLIPSIL® XL-120 sealing plug is fully abutting to the SLIPSIL® XL-120 conduit sleeve. This automatically guarantees that the SLIPSIL® XL-120 sealing plug is fully inserted and abutting against the shoulder inside the SLIPSIL® XL-120 conduit sleeve.
The flange of the plugs is clearly marked with the SLIPSIL® logo.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



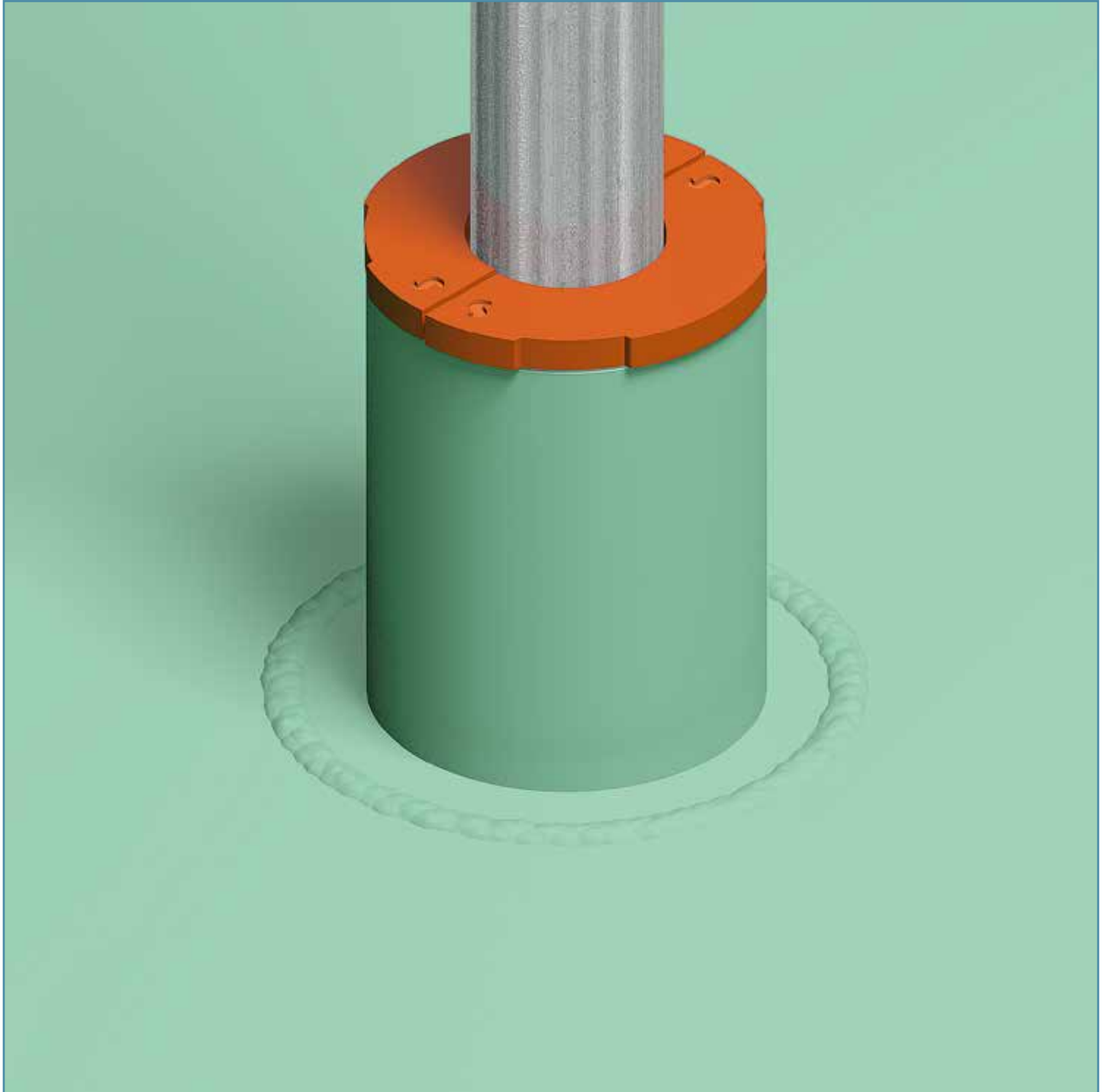
The SLIPSIL® XL-120 sealing plug fully inserted in the SLIPSIL® XL-120 conduit sleeve with a shoulder inside. The shoulder makes further insertion impossible. The flange of the plug is abutting to the front side of the conduit sleeve. The advantage of the SLIPSIL® XL-120 sealing system is the overall conduit depth of 113 mm. The engineered design of the plug profiling ensures that the rubber is hardly exposed to any compressive loads and will therefore maintain the tightness ratings over a long service life.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



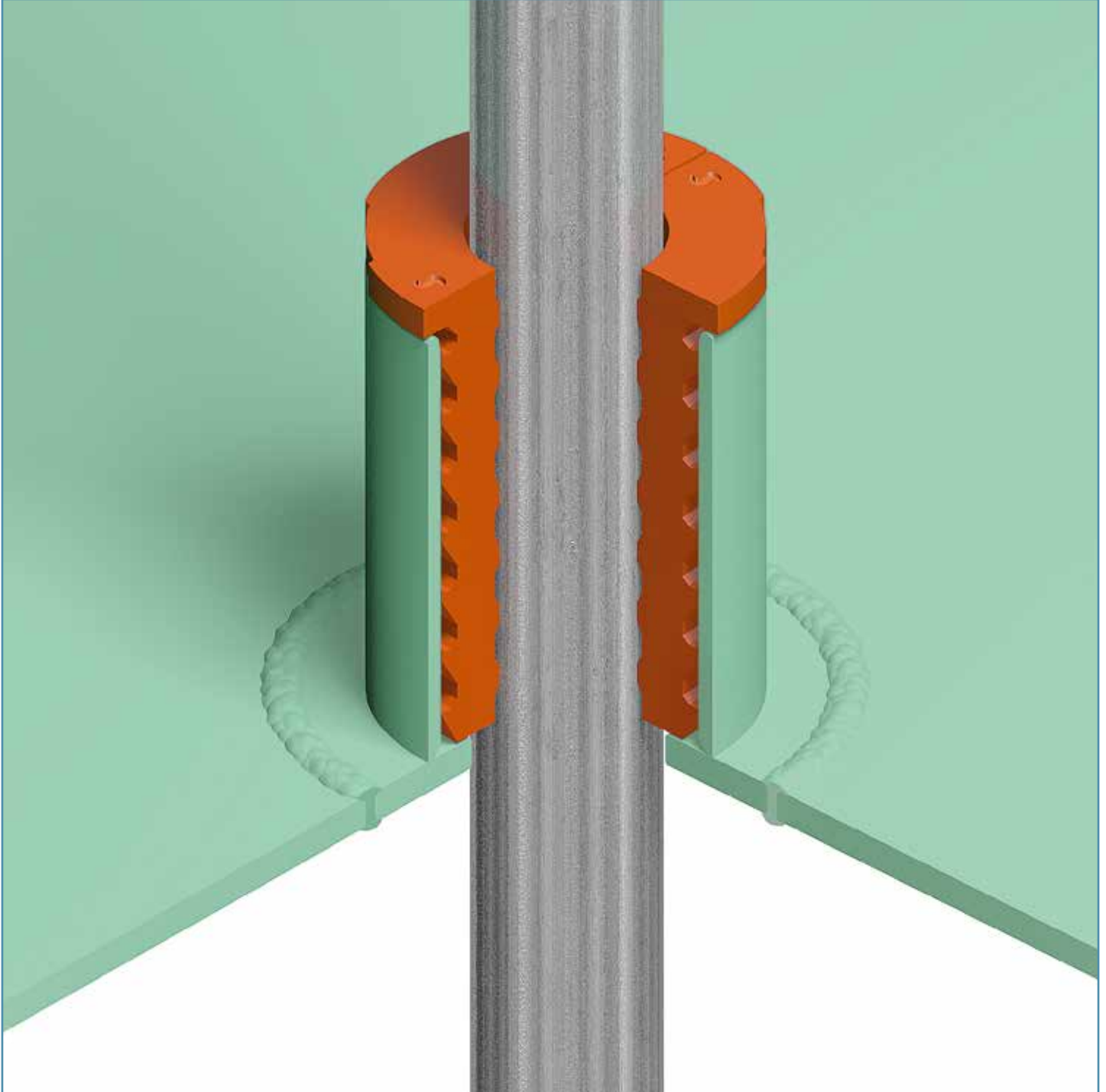
For horizontal ducts of heavy pipes/cables, it is important to support the pipes properly on both sides of the conduit. The use of SLIPSIL® XL-120 sealing plugs allows ducting of a variety of metallic pipes. The plugs prevent galvanic corrosion, and absorb vibrations. The NOFIRNO® rubber, from which the SLIPSIL® XL-120 sealing plugs are made, allows for application in a wide temperature range from -60 up to +180 °C. The SLIPSIL® XL-120 sealing system offers excellent durability. NOFIRNO® rubber has very good UV, Ozone and weathering resistance. NOFIRNO® rubber has very endothermic properties and forms a protective ceramic shield under fire exposure.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



The SLIPSIL® XL-120 sealing system is also applicable for deck penetrations with the conduit sleeve above or below the deck.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



The SLIPSIL® XL-120 sealing system is also applicable for deck penetrations with the conduit sleeve above or below the deck.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 BLIND SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



SLIPSIL® XL-120 blind sealing plugs consist also of two segments.

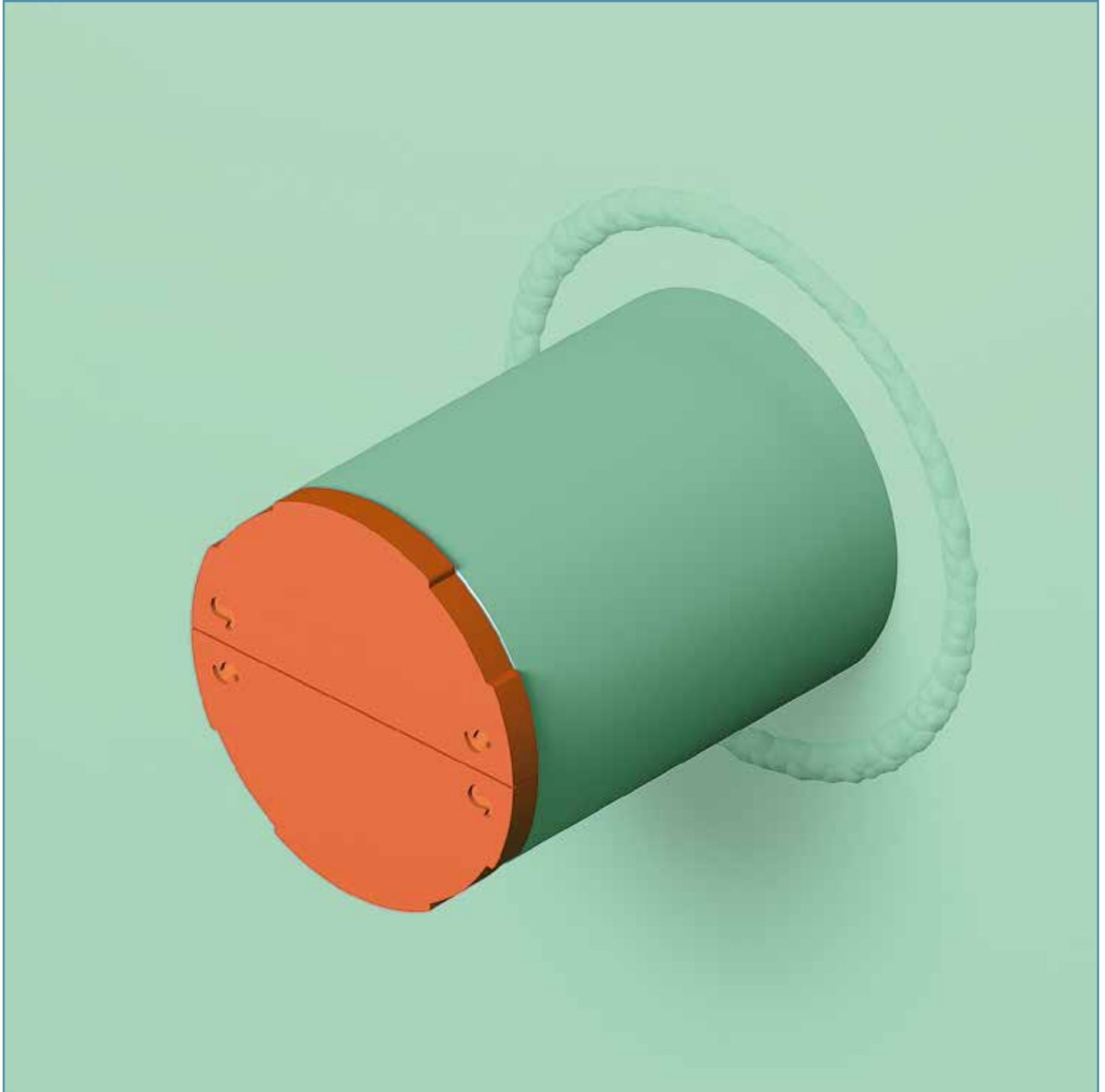
INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 BLIND SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



Due to the length of the SLIPSIL® XL-120 sealing system, it might not be possible to completely insert the SLIPSIL® XL-120 blind plugs by hand.

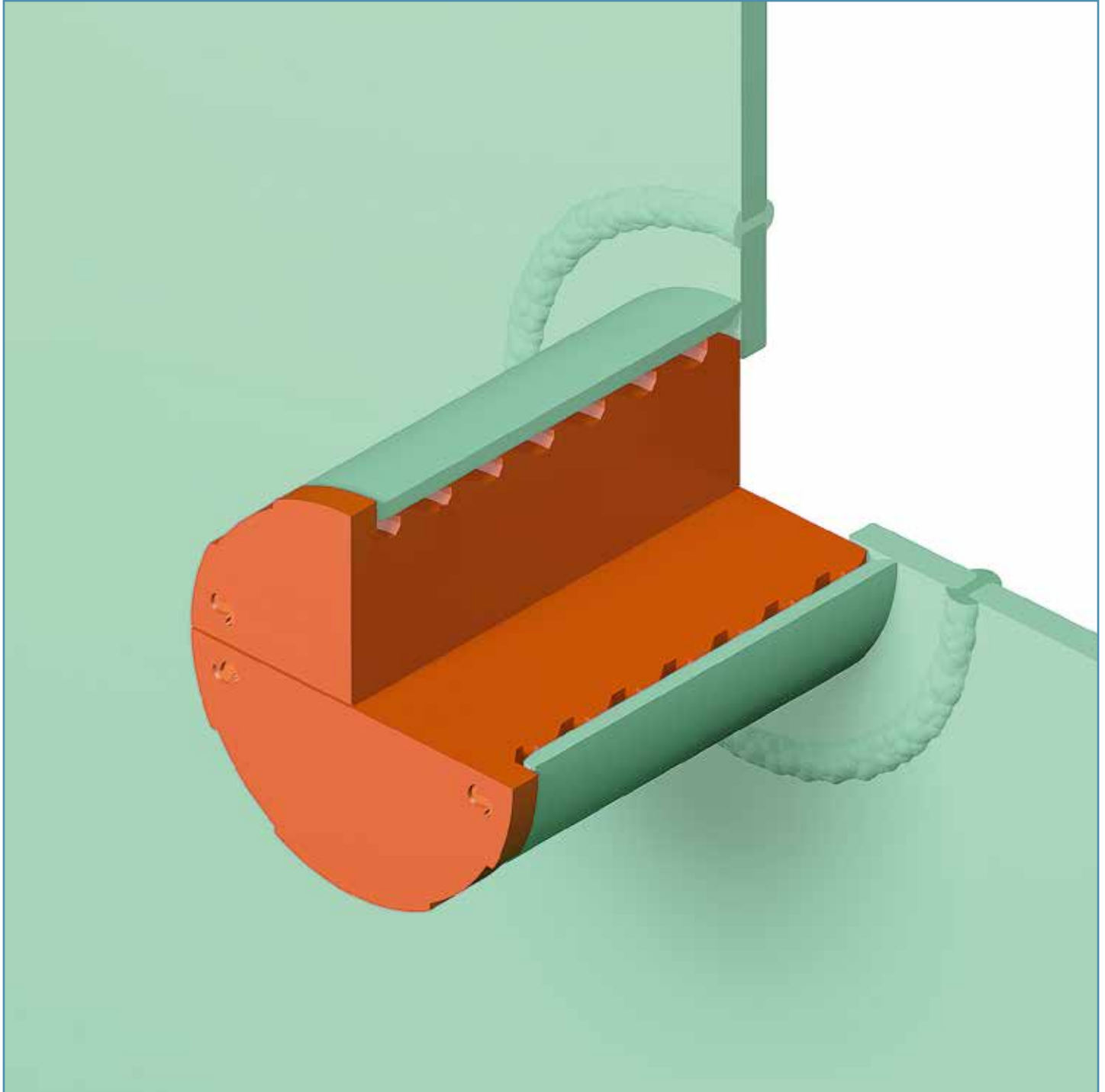
In such a case, the SLIPSIL® XL-120 blind sealing plug can be tapped in using a hammer and a piece of wood. Use a flat piece of wood to prevent the flange of the plug from damage.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 BLIND SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



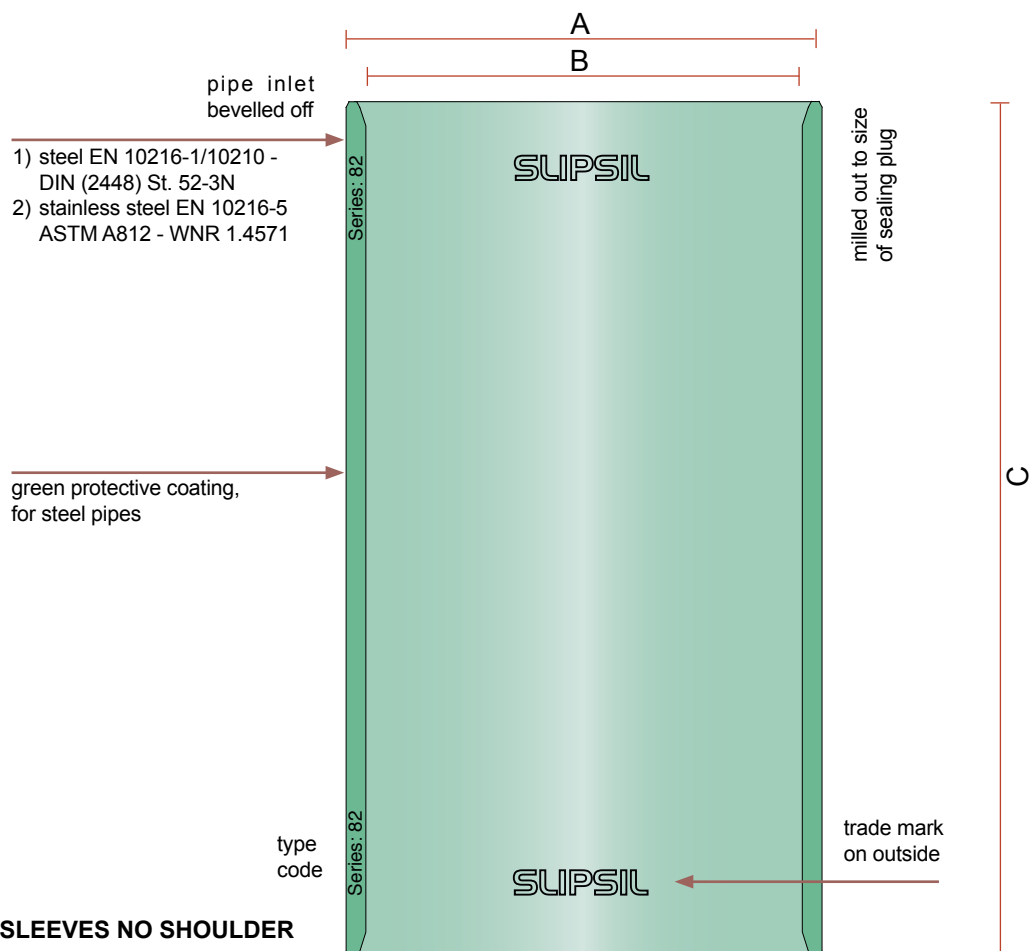
The finished sealing system.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 BLIND SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



The finished sealing system.

INSTALLATION INSTRUCTIONS SLIPSIL[®] XL-120 SEALING PLUGS IN SLIPSIL[®] CONDUIT SLEEVES FOR CENTRIC APPLICATIONS



CONDUIT SLEEVES NO SHOULDER

SL 41 XL	max. OD ducted pipe 20
SL 55 XL	max. OD ducted pipe 28
SL 62 XL	max. OD ducted pipe 34
SL 70 XL	max. OD ducted pipe 42
SL 82 XL	max. OD ducted pipe 54
SL 100 XL	max. OD ducted pipe 64
SL 107 XL	max. OD ducted pipe 64
SL 131 XL	max. OD ducted pipe 88.9
SL 150 XL	max. OD ducted pipe 114.3
SL 207 XL	max. OD ducted pipe 168.3

FOR SLIPSIL[®] XL-120 SEALING PLUGS:

C=120 mm

art. no: 60.8071 up to 60.8095

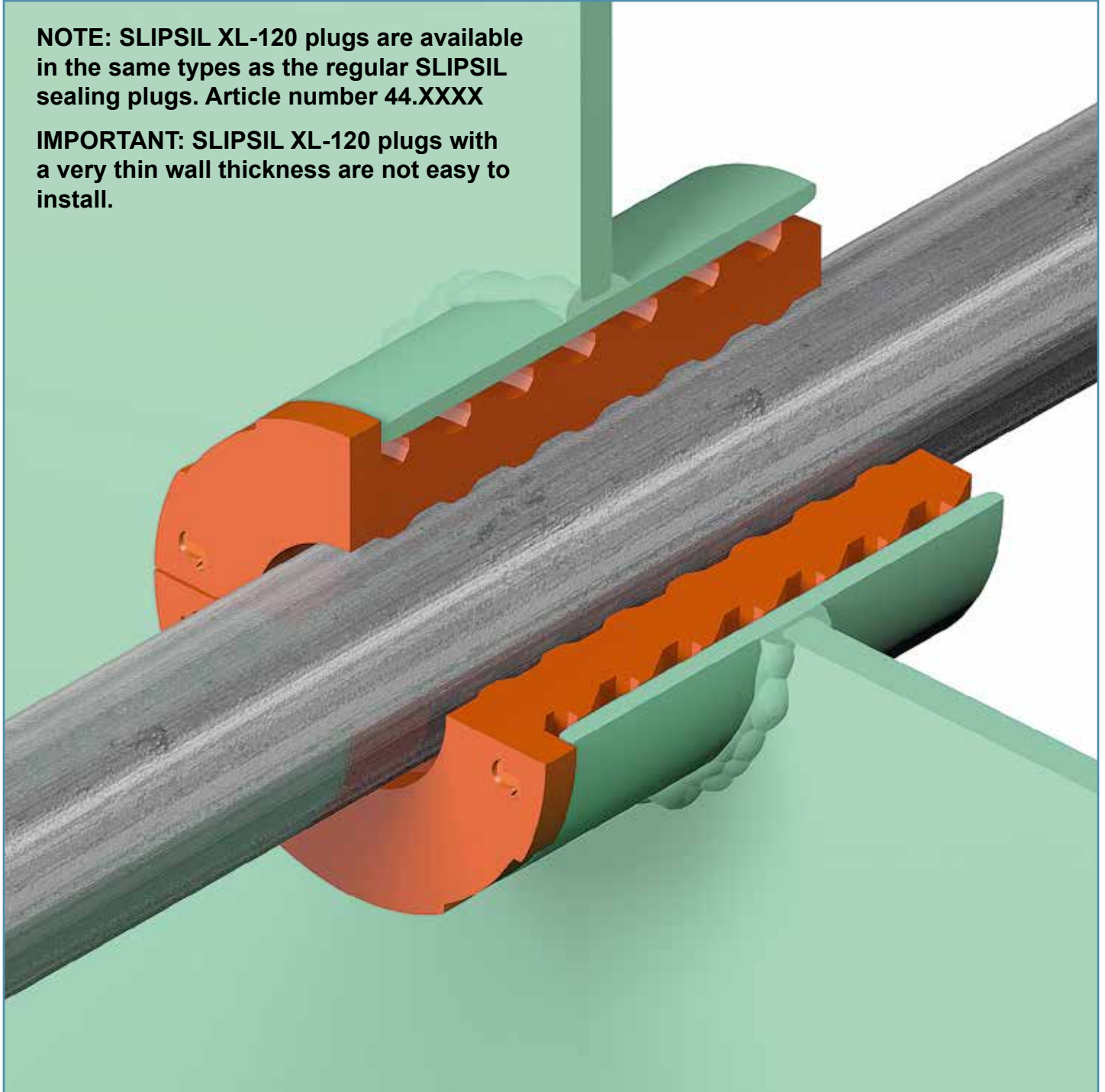
All dimensions in mm

type	A	B	C	art. no. steel	art. no. stainless	C	art. no. steel	art. no. stainless	C	art. no. steel	art. no. stainless
SL 41 WS-cr	48.5	41	180	60.8101	60.8116	200	60.8131	60.8146	250	60.8161	60.8176
SL 55 WS-cr	62.5	55	180	60.8102	60.8117	200	60.8132	60.8147	250	60.8162	60.8177
SL 62 WS-cr	70	62	180	60.8103	60.8118	200	60.8133	60.8148	250	60.8163	60.8178
SL 70 WS-cr	78	70	180	60.8104	60.8119	200	60.8134	60.8149	250	60.8164	60.8179
SL 82 WS-cr	90	82	180	60.8105	60.8120	200	60.8135	60.8150	250	60.8165	60.8180
SL 100 WS-cr	108	100	180	60.8106	60.8121	200	60.8136	60.8151	250	60.8166	60.8181
SL 107 WS-cr	115	107	180	60.8107	60.8122	200	60.8137	60.8152	250	60.8167	60.8182
SL 131 WS-cr	140	131	180	60.8108	60.8123	200	60.8138	60.8153	250	60.8168	60.8183
SL 150 WS-cr	159	150	180	60.8109	60.8124	200	60.8139	60.8154	250	60.8169	60.8184
SL 207 WS-cr	220	207	180	60.8110	60.8125	200	60.8140	60.8155	250	60.8170	60.8185

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN CENTRICALLY INSTALLED CONDUIT SLEEVES

NOTE: SLIPSIL XL-120 plugs are available in the same types as the regular SLIPSIL sealing plugs. Article number 44.XXXX

IMPORTANT: SLIPSIL XL-120 plugs with a very thin wall thickness are not easy to install.

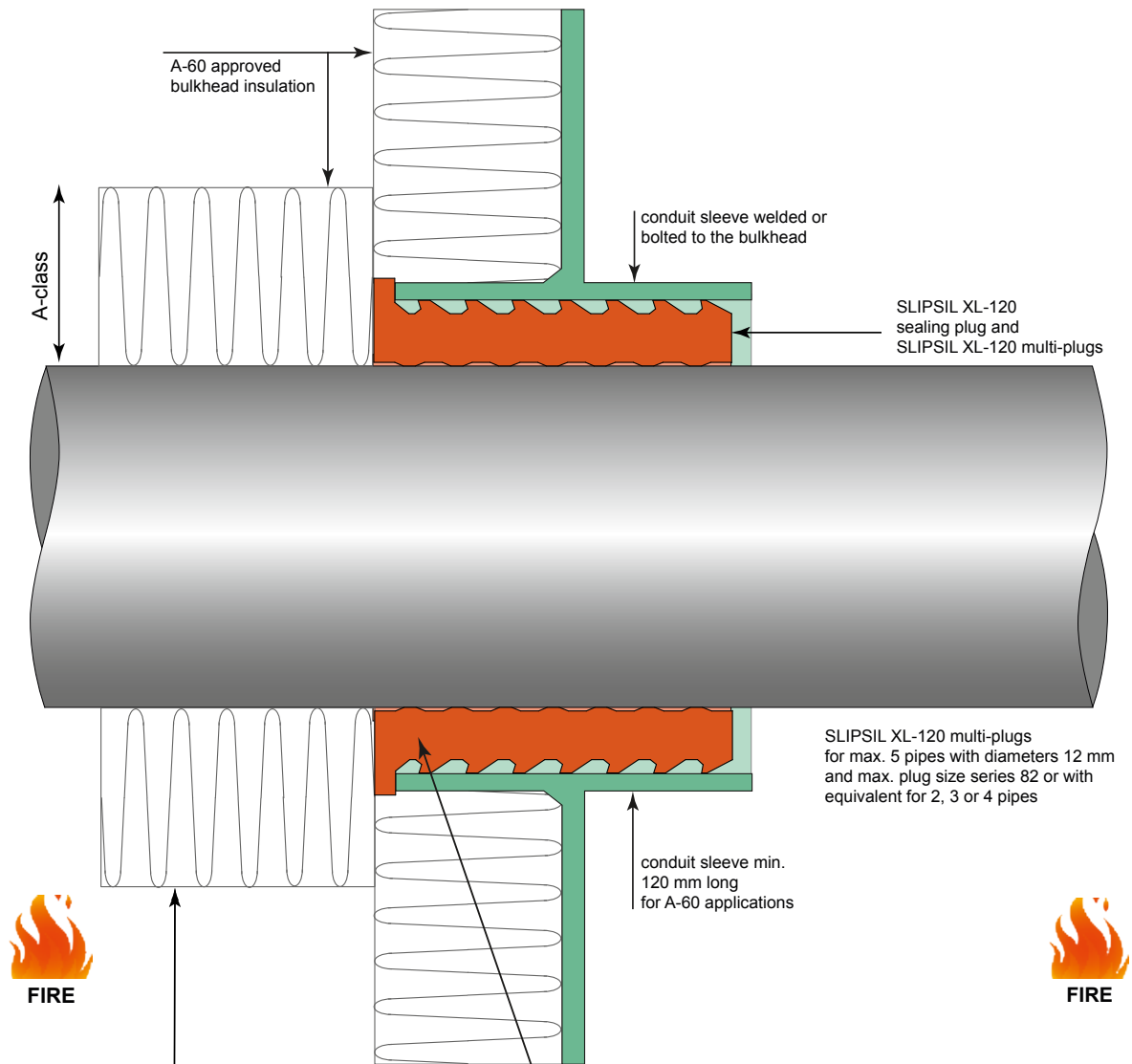


The finished sealing system. The conduit sleeves are delivered matching the length of the SLIPSIL® XL-120 sealing plugs. The plugs can also be inserted in fitting conduit sleeves with a longer length. For A-class penetrations the bulkhead and the conduit sleeve need to be insulated on the unexposed side with approved A-60 class insulation; for decks on the exposed side. Alternatively the conduit and the ducted metallic pipe (max. 8" NPS) can be insulated with the non-combustible FYLLOFYS® insulation (Efectis test report EFR-17-OMI-003574). MED certificate 182130001AA01 issued by KIWA Netherlands.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN CENTRICALLY INSTALLED CONDUIT SLEEVES

**direction of exposure:
fire from either side**

**SLIPSIL XL-120 PLUG SEALING SYSTEM for
steel/ss/CuNi pipes
min. 0.125" - max. 8" NPS**



SLIPSIL XL-120 multi-plugs
for max. 5 pipes with diameters 12 mm
and max. plug size series 82 or with
equivalent for 2, 3 or 4 pipes

conduit sleeve min.
120 mm long
for A-60 applications

length of Insulation around ducted pipe:

steel/ss/CuNi pipes

up to 1"	none
>1" up to 3"	300 mm
>3" up to 6"	450 mm
>6" up to 8"	550 mm
8"	650 mm

Installation SLIPSIL XL-120
sealing plug from either side
of the conduit sleeve

conduit sleeve positioned:
- **symmetrically**
or
- **non-symmetrically with longest
length on unexposed side**



Description: SLIPSIL XL-120 plug sealing system for A-60 class bulkheads

Mat.: NOFIRNO rubber

Ref.: JAB

Date:

22-01-2018

Scale:

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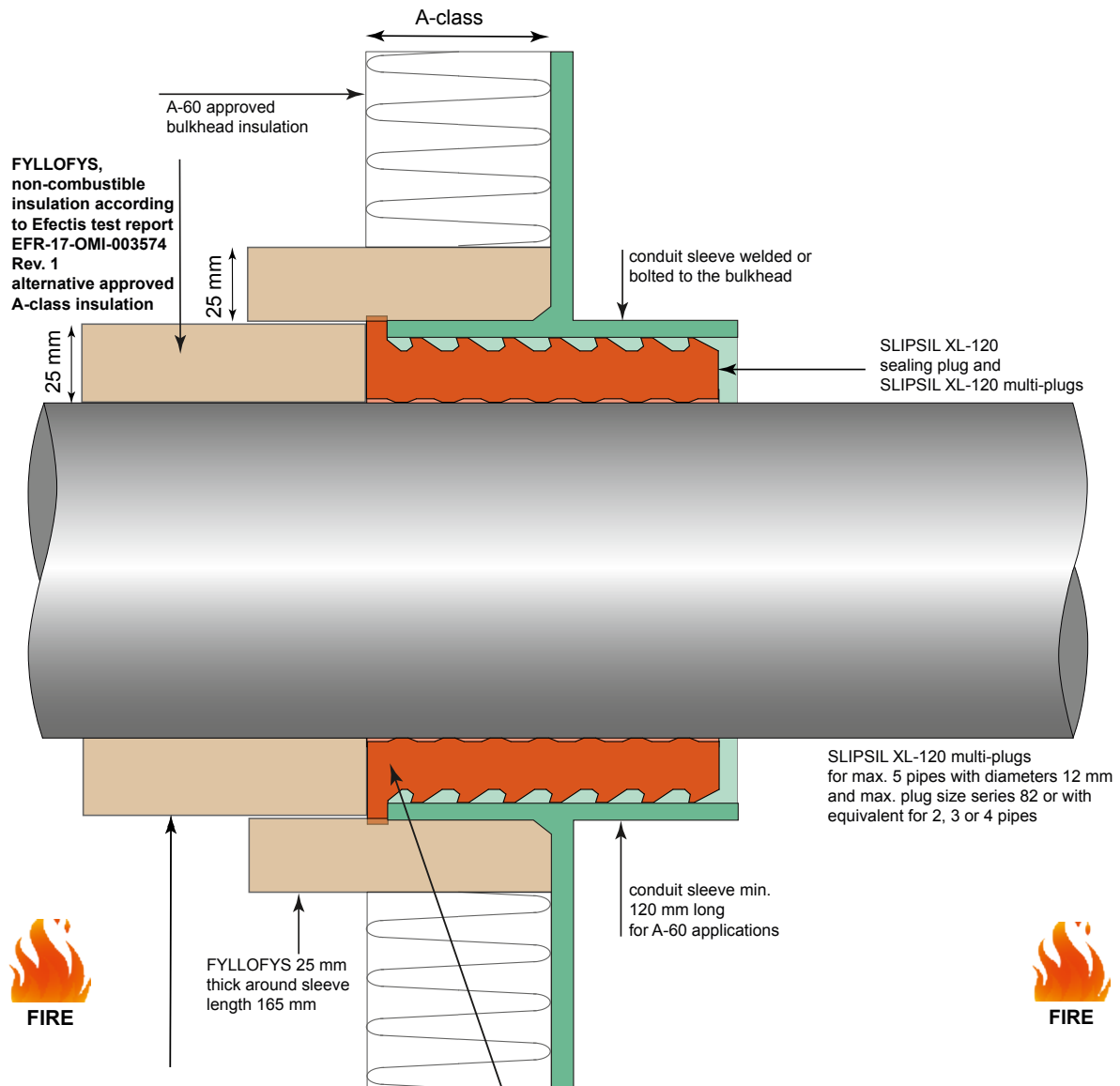
Rev. 2

SLX 050E

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN CENTRICALLY INSTALLED CONDUIT SLEEVES

**direction of exposure:
fire from either side**

**SLIPSIL XL-120 PLUG SEALING SYSTEM for
steel/ss/CuNi pipes
min. 0.125" - max. 8" NPS**



length of FYLLOFYS insulation around ducted pipe:

steel/ss/CuNi pipes

up to 1"	none
>1" up to 3"	300 mm
>3" up to 6"	450 mm
>6" up to 8"	550 mm
8"	650 mm

Installation SLIPSIL XL-120
sealing plug from either side
of the conduit sleeve

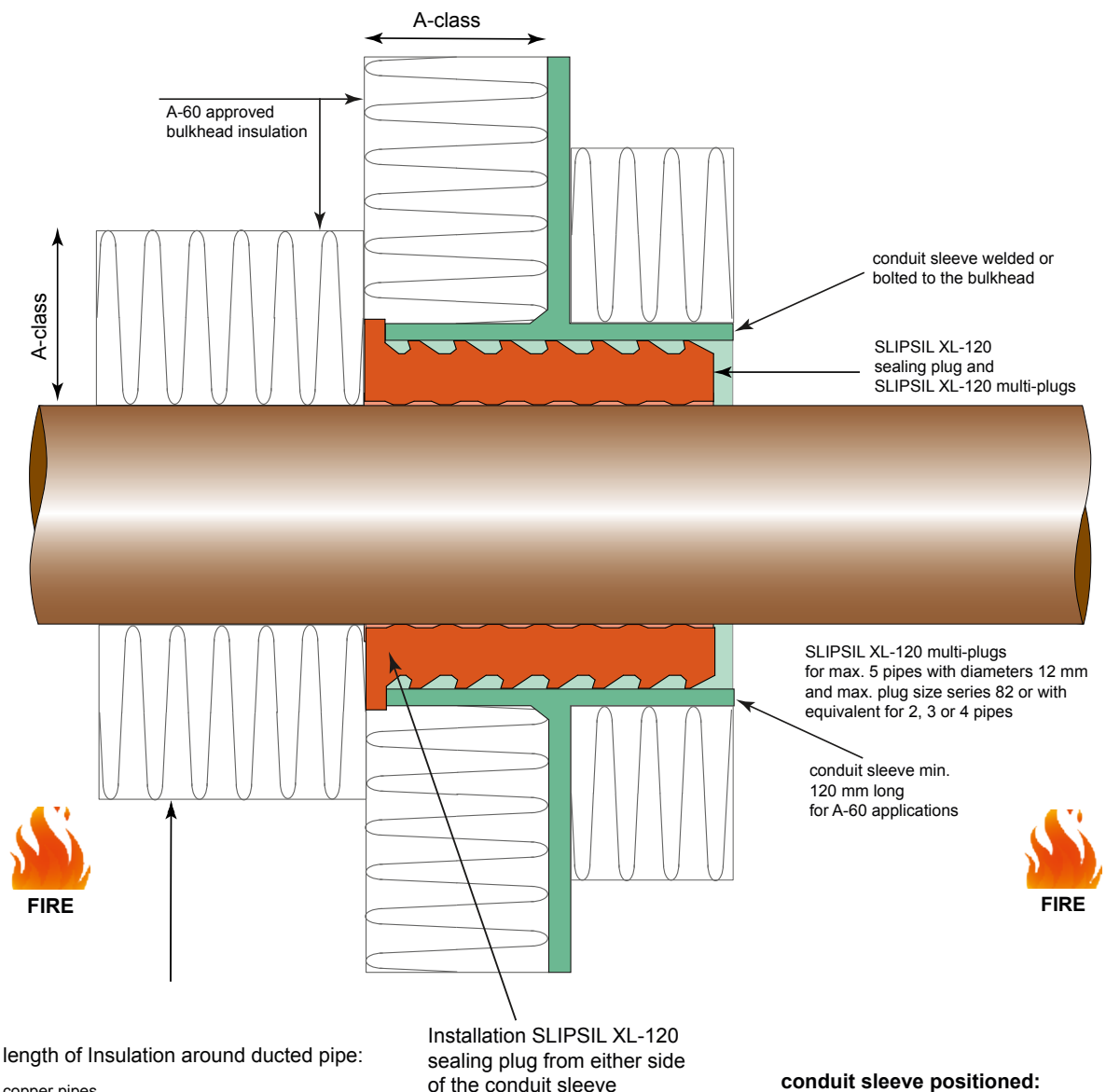
conduit sleeve positioned:

- **symmetrically**
- or**
- **non-symmetrically with longest length on unexposed side**

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN CENTRICALLY INSTALLED CONDUIT SLEEVES

**direction of exposure:
fire from either side**

**SLIPSIL XL-120 PLUG SEALING SYSTEM for
copper pipes min. 0.125" - max. 4" NPS**



length of Insulation around ducted pipe:

copper pipes

up to 1"	200 mm
>1" up to 2"	500 mm
>2" up to 4"	800 mm
4"	1000 mm

Installation SLIPSIL XL-120
sealing plug from either side
of the conduit sleeve

conduit sleeve positioned:

- symmetrically
- or
- non-symmetrically with longest length on unexposed side



Description: SLIPSIL XL-120 plug sealing system for A-60 class bulkheads

Mat.: NOFIRNO rubber

Ref.: JAB

Date:

22-01-2018

Scale:

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INSTALLATION INSTRUCTIONS

SLIPSIL® CONDUIT SLEEVES AND SLIPSIL® SEALING PLUGS

PRODUCT INFORMATION

FYLLOFYS® THERMAL INSULATION

01) material base	hydrous phyllosilicate
02) finishing	FISSIC® non-combustible coating
02) specific gravity	500 ± 50 kg/m ³
03) application limit	1100 °C
04) cold compressive strength	1.5 N/mm ² (DIN-EN 1094-5)
05) thermal expansion (linear)	0.6% (750 °C)
06) permanent linear change	< 1% (1000 °C)
07) thermal conductivity	0.15 W/mK (200 °C) 0.17 W/mK (400 °C) 0.19 W/mK (600 °C) ASTM C 1113
08) non-combustible	test report Efectis No. EFR-17-OMI-003574 rev.1 according to FTP code 2010 - Part 1: non-combustibility test (ISO 1182)

PRODUCT INFORMATION

FISSIC® PROTECTIVE COATING

- FISSIC®** is a fire retardant coating on the basis of an APEO-free water-based polymer emulsion without the addition of VOC containing solvents.
- FISSIC®** has been tested successfully on flame spread characteristics and toxicity and is classed as "not capable of producing excessive quantity of smoke or toxic product". MED certificate 39278/B0 EC issued by Bureau Veritas.
- FISSIC®** is fire proof and salt water resistance (even after fire). KIWA Netherlands report 20150421HN01.
- FISSIC®** is gas tight 30 mBar.
- FISSIC®** is water impermeable. KIWA Netherlands report 20160203TW01
- FISSIC®** resistance to diesel & petrol. KIWA Netherlands report 20160224TW01
- FISSIC®** prevents "CUI - corrosion underneath insulation"
- FISSIC®** successfully SBI tested according to EN 13823:2010 for B-s1-d0 class rating
- FISSIC®** successfully tested according to ISO 1716 for A2-s1-d0. Warrington report 18250B
- FISSIC®** adhesion 3.84 MPa according to ISO 4624:08-2003. KIWA report P 10498a
- FISSIC®** successfully tested on wear resistance according to EN 660-1:1999 - no mass reduction after 2000 double-strokes with a load of 17 kg. KIWA Polymer Institute report P 11035-E

PRODUCT INFORMATION

FYLLOFYS®/FISSIC® THERMAL INSULATION PRODUCTS

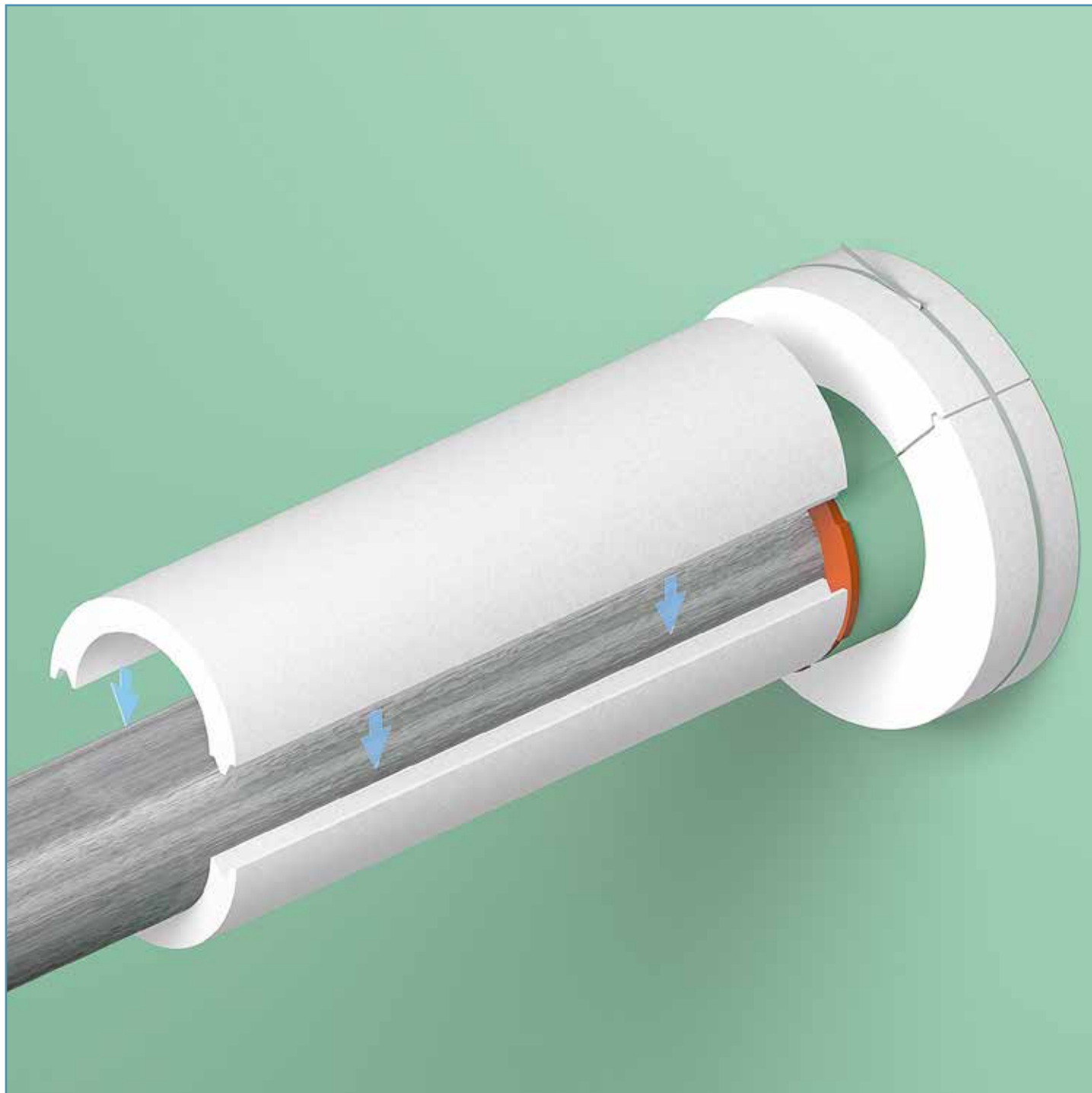
01) temperature cycling	-50 °C to + 100 °C - no changes
02) QUV weathering	96 hours + 336 hours exposure acc. to ISO 11507 method A - no changes with a 0.5 mm thick FISSIC® coating
03) seawater resistance	96 hours + 336 hours exposure acc. to ISO 9227 - with 0.5 mm thick coating - limited water absorption
04) mechanical stability	FYLLOFYS® with FISSIC® coating - 3 point bending test - improvement of Fmax (N) and DLbreak (%) with coating thickness 0.5 - 1.5 mm

IN-HOUSE TESTING NO. BBV_0042 - MARCH-MAY 2018

FYLLOFYS

FISSIC

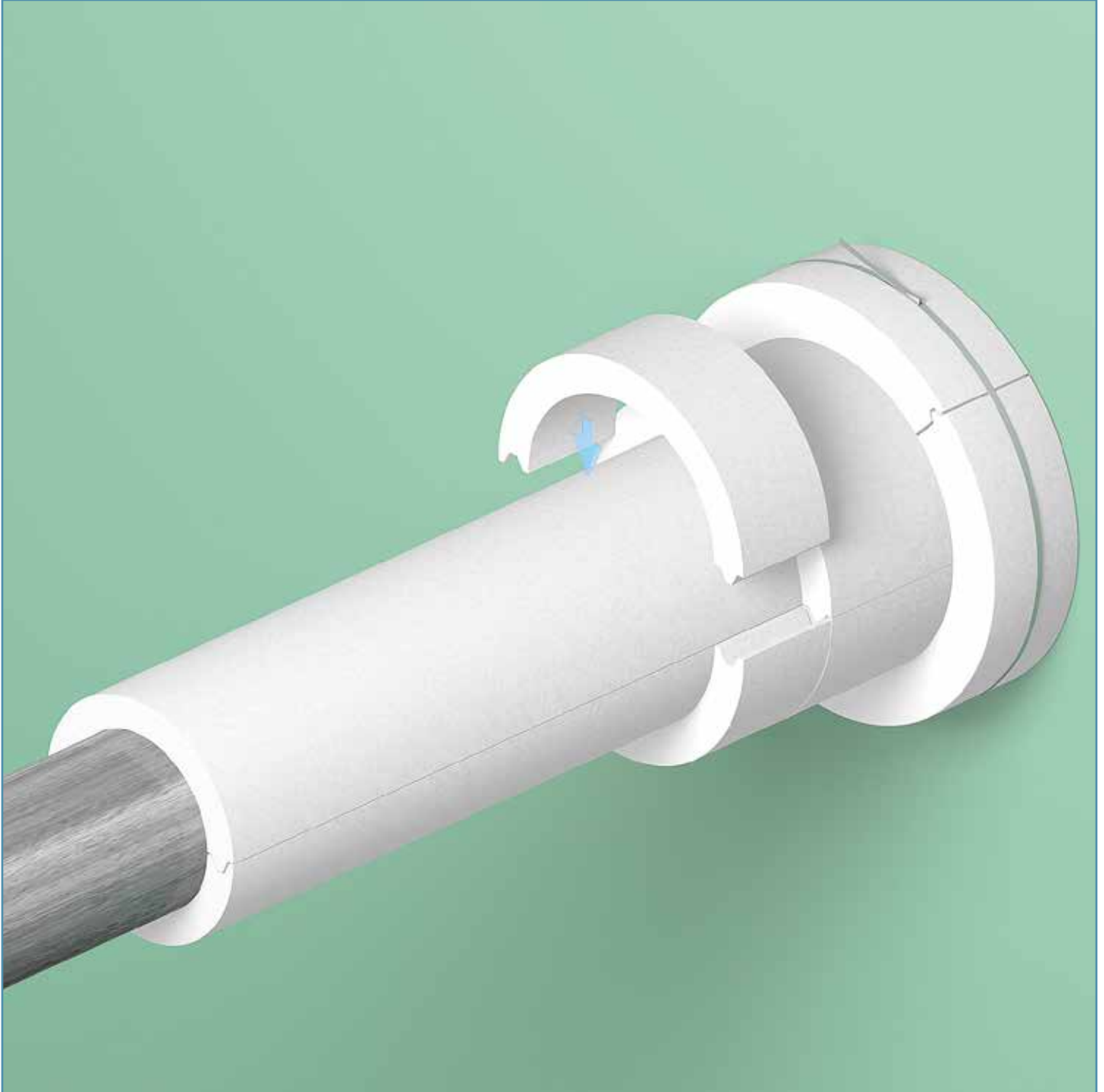
INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN CENTRICALLY CONDUIT SLEEVES



In order to satisfy insulation criteria of the MSC 307(88) resistance test we have developed a new insulation material, called FYLLOFYS®. Rather than working with fiber mats around coamings and sleeves which is not easy, time consuming and vulnerable, FYLLOFYS® is delivered in shells fitting around the conduit sleeves and ducted pipes.

With the FYLLOFYS® non-combustible, pre-fabricated shells (successfully tested according to FTP code 3.1, 2010, i.e.- ISO 1182:2010. Reference is made to Efectis test report EFR-17-OMI-003574 rev.1.) fire tests with pipe transits carried out officially for Type Approval certification have not only proven the better performance versus fiber mats, but also a reduction in thickness to be installed.

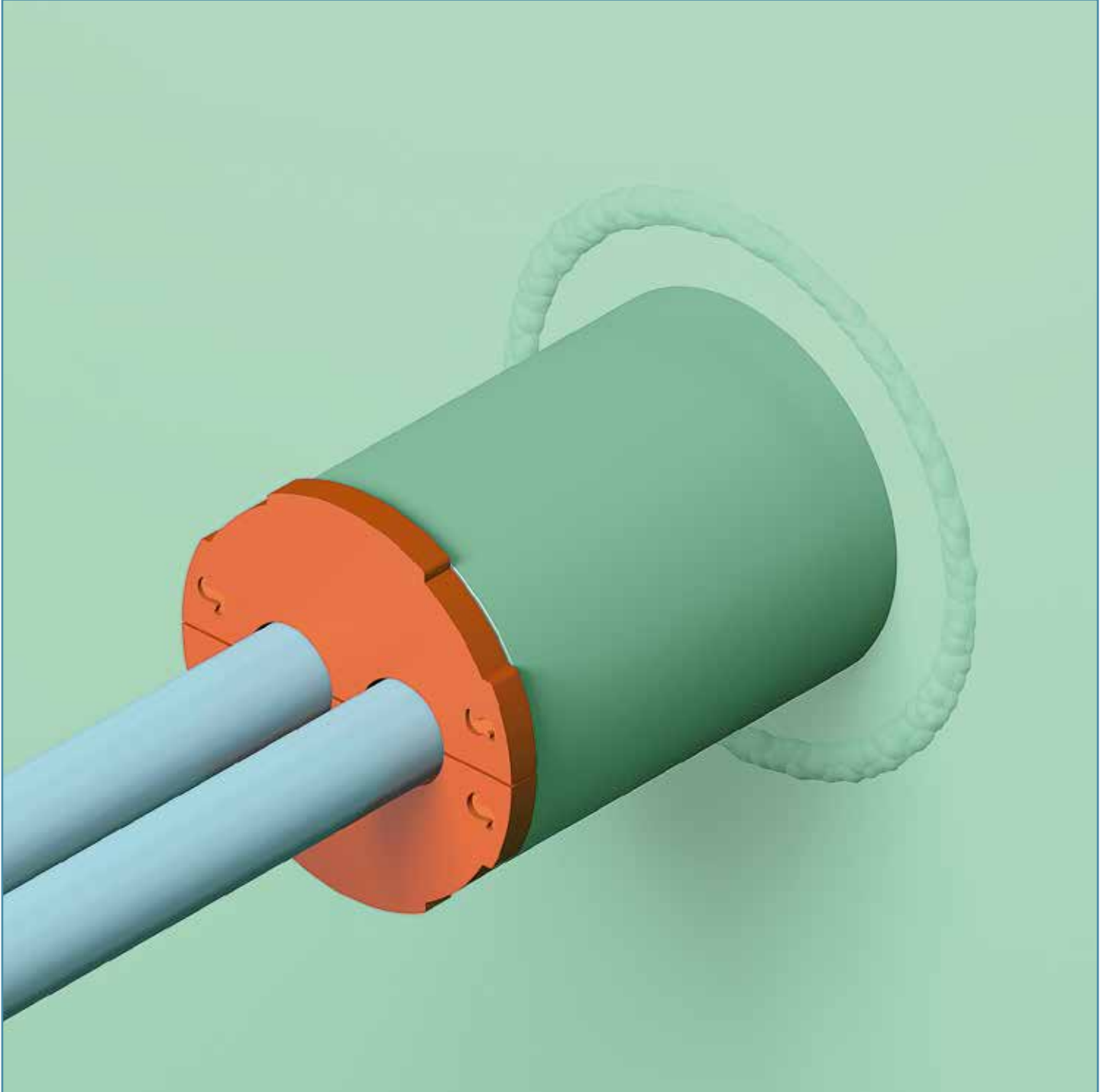
INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN SLIPSIL® XL-120 DOUBLE SIDED CONDUIT SLEEVES



The FYLLOFYS® thermal insulation shells are coated with FISSIC® coating to prevent moisture or vapour absorption of the insulation and to improve overall mechanical strength. FISSIC® coating is also non-combustible (successfully SBI tested according to EN 13823:201 and ISO 1716:2010 for A-class rating - A2-s1-d0 (not significantly contributing to the fire load and fire growth, no smoke/flames, no droplets). Warrington Report 18250B.

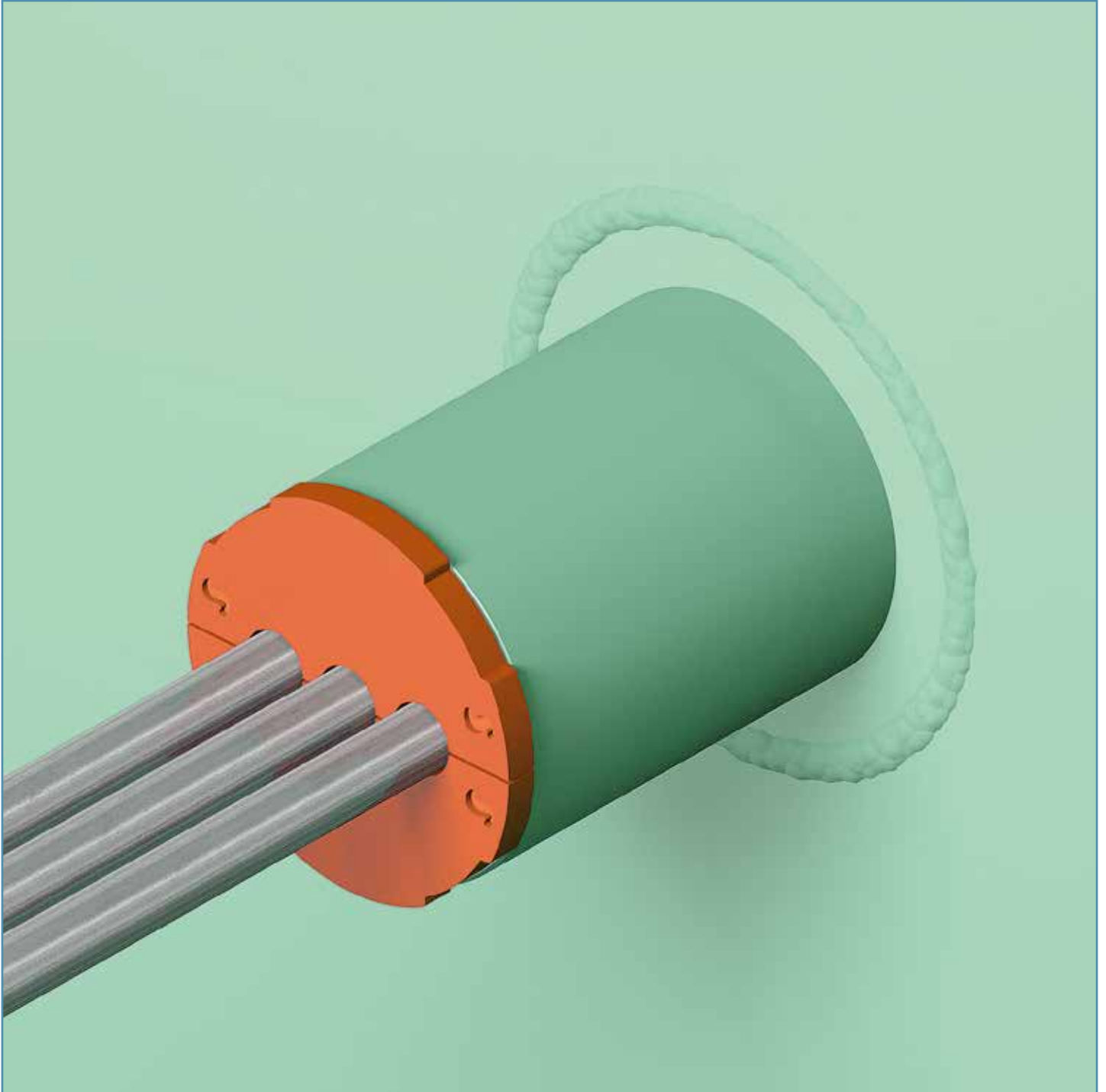
MED certificate 39278B-0 EC issued by Bureau Veritas for low flame spread characteristics.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 MULTI-SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



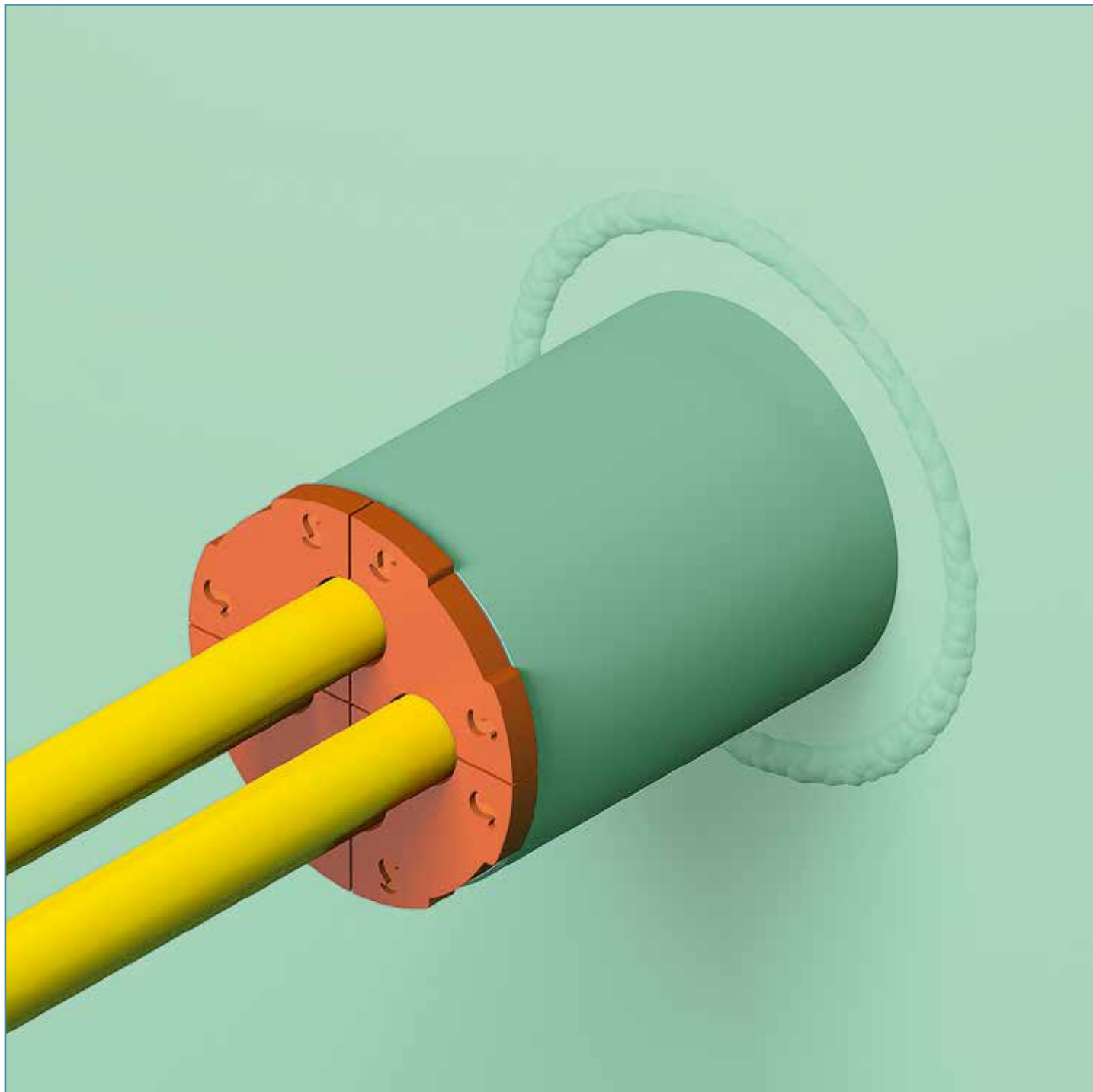
SLIPSIL® XL-120 sealing plugs for 2 cables/pipes with the same diameter.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 MULTI-SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



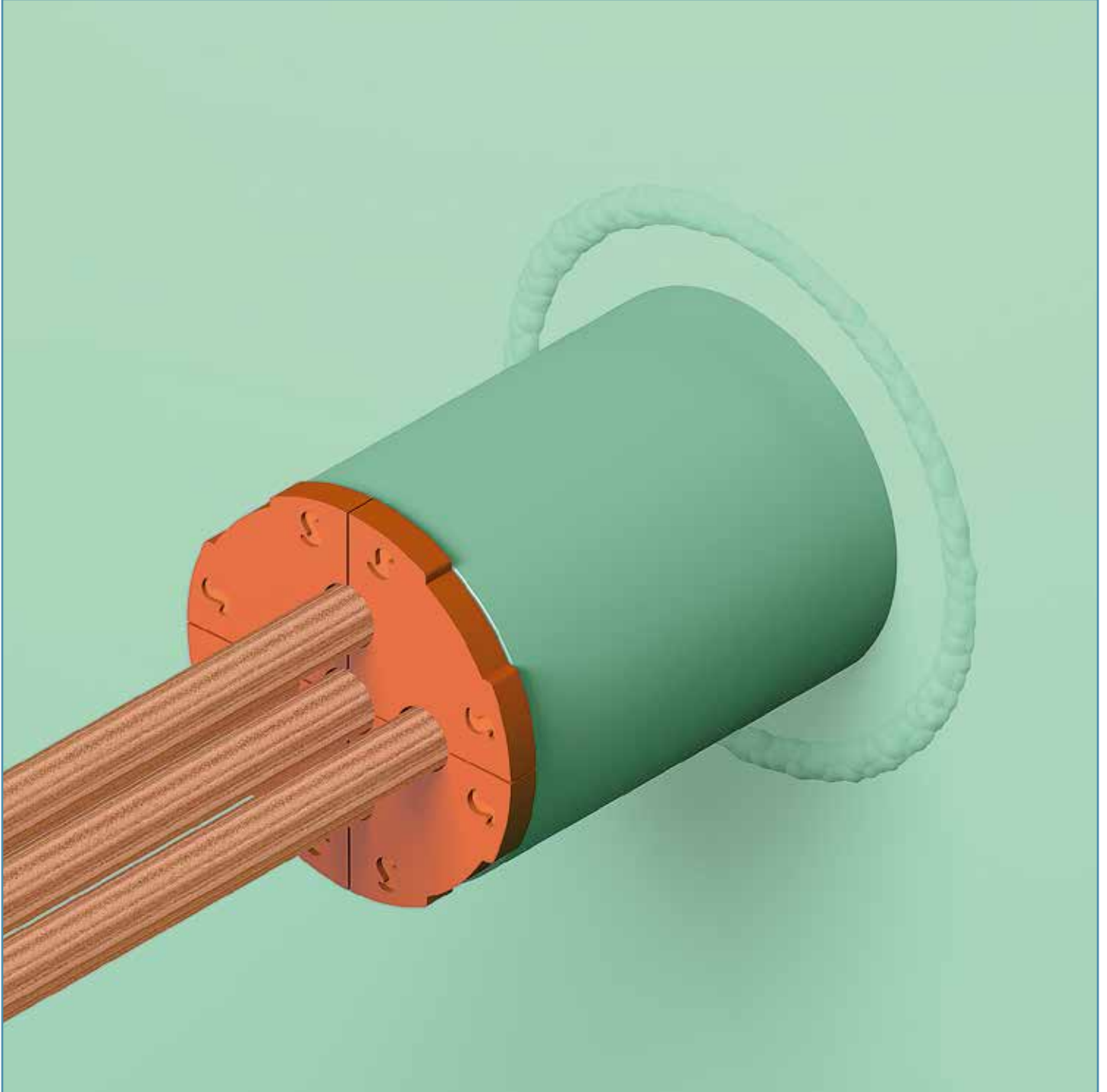
SLIPSIL® XL-120 sealing plugs for 3 cables/pipes with the same diameter.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 MULTI-SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



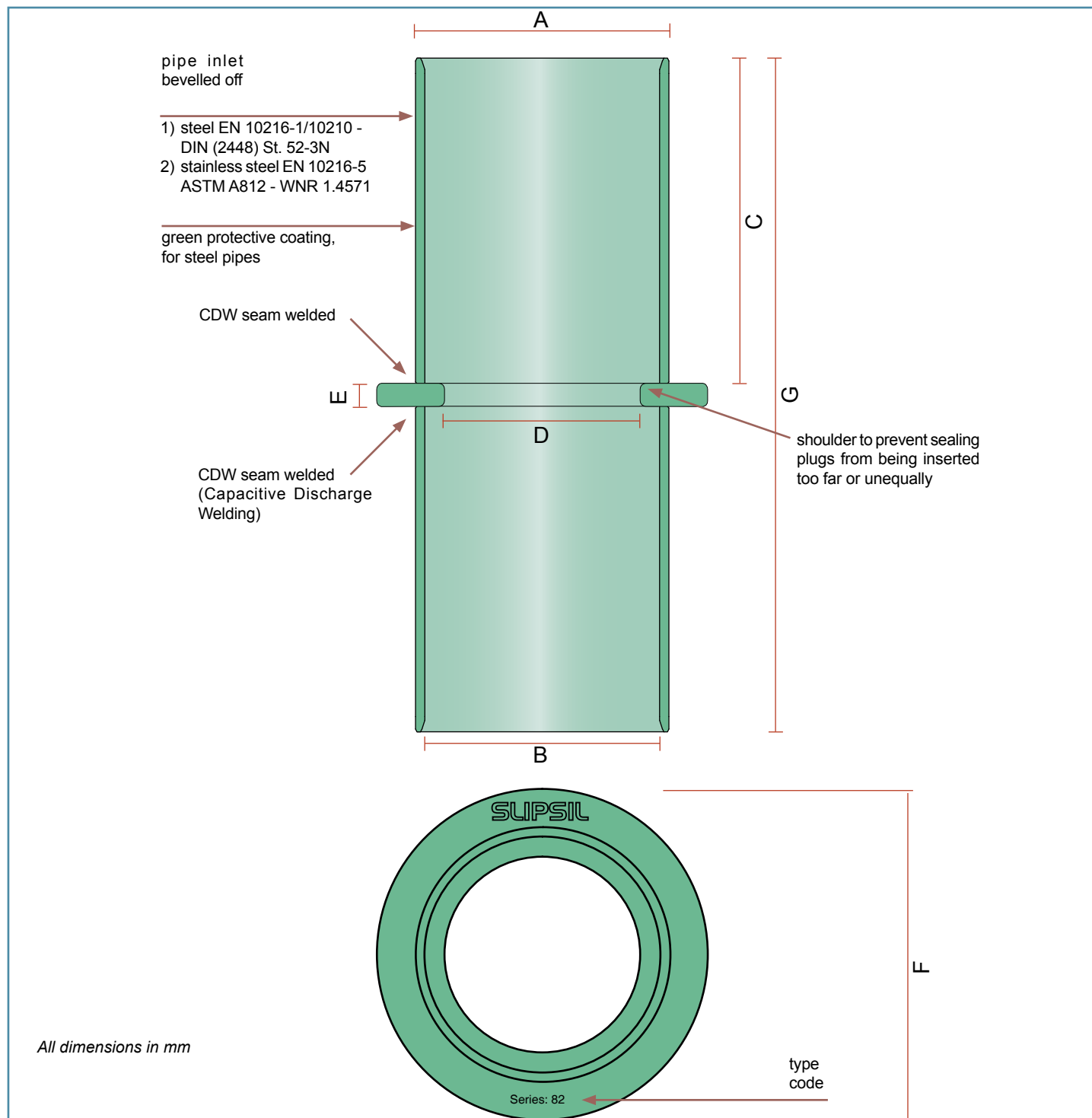
SLIPSIL® XL-120 sealing plugs for 4 cables/pipes with the same diameter.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 MULTI-SEALING PLUGS IN SLIPSIL® XL-120 CONDUIT SLEEVES



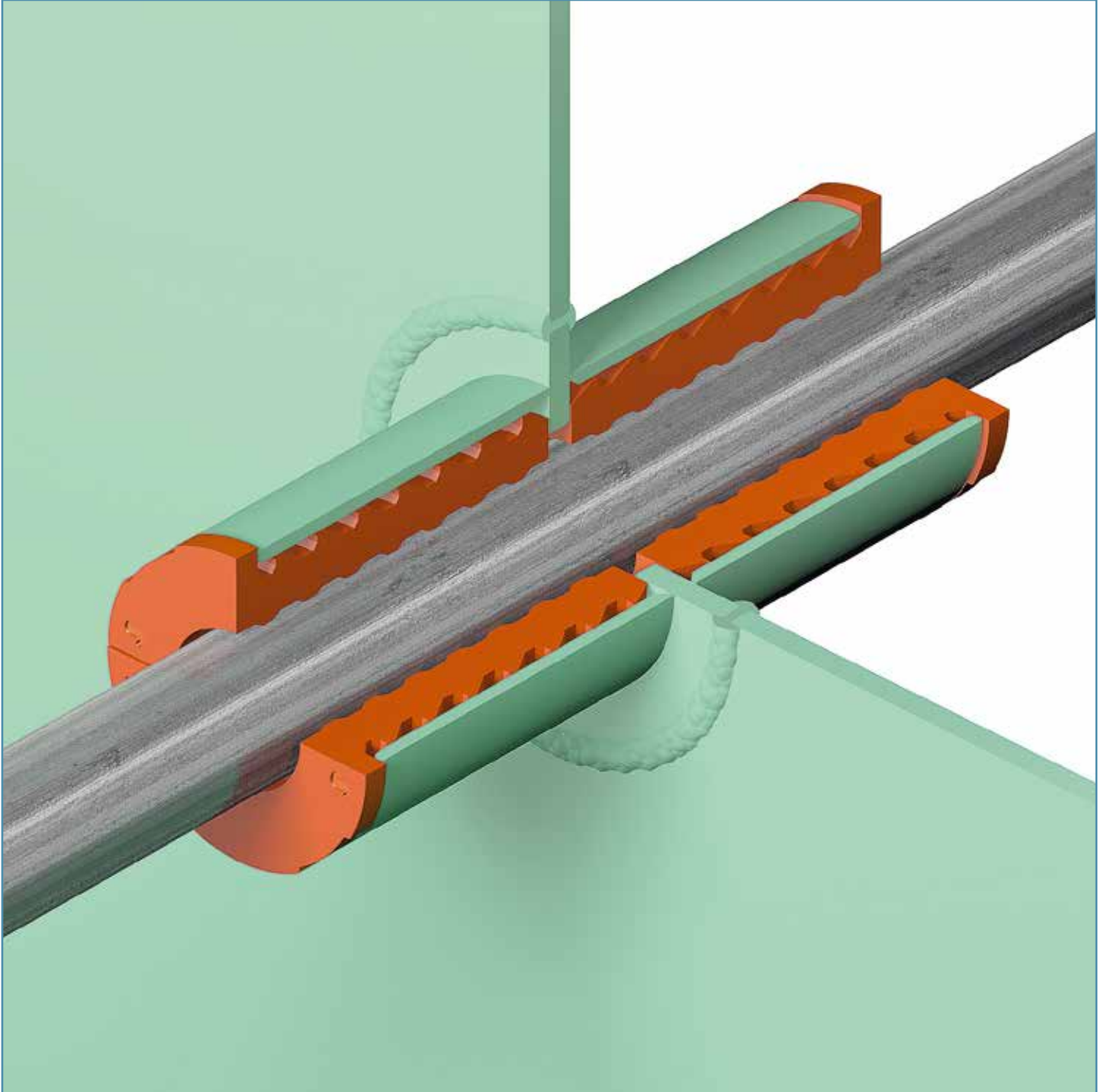
SLIPSIL® XL-120 sealing plugs for 5 cables/pipes with the same diameter.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN CENTRICALLY INSTALLED CONDUIT SLEEVES



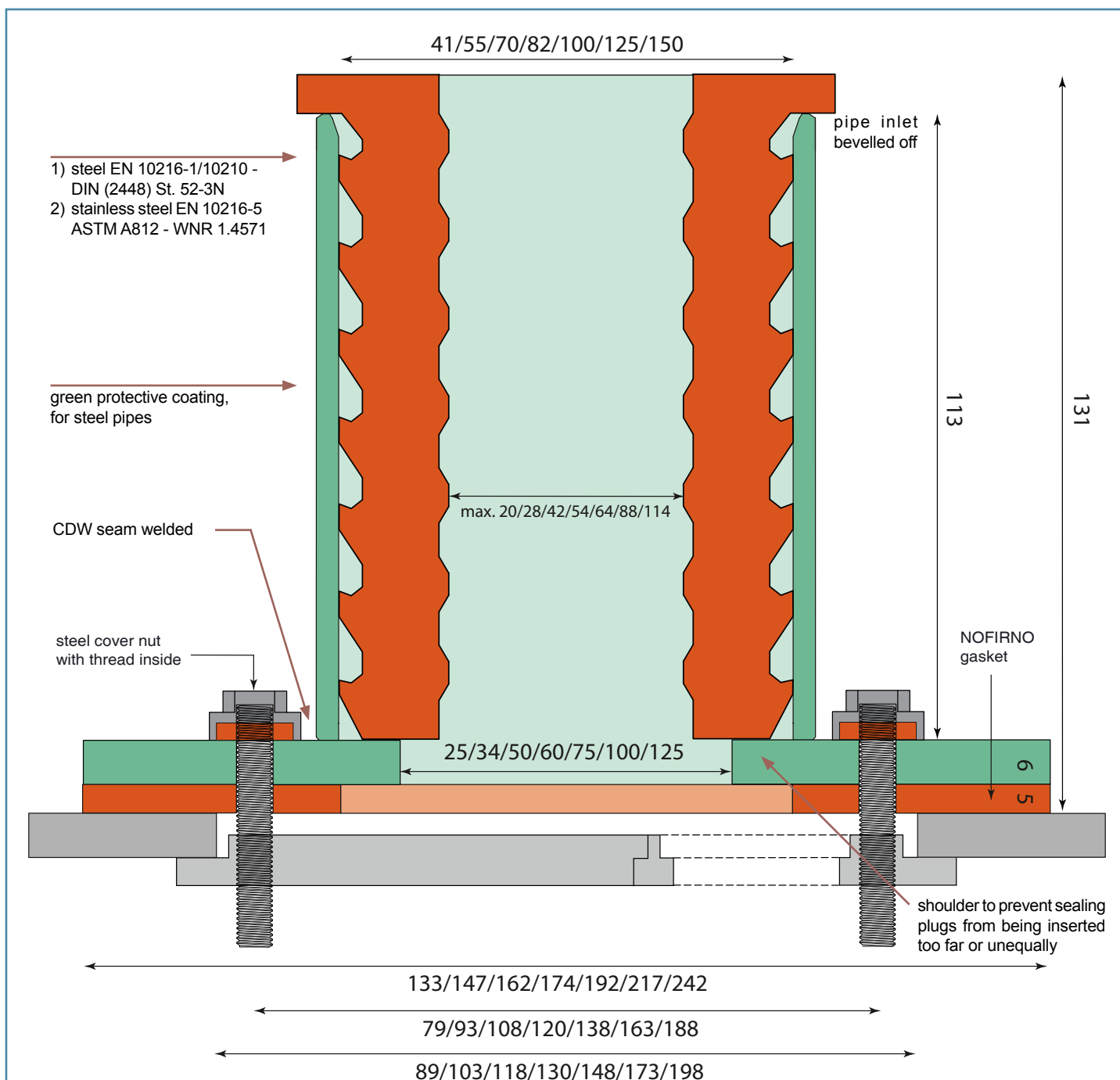
type	A	B	C	D	E	F	G	art. no. steel	art. no. stainless
SL 41 WD XL	48.5	41	113	25	10	75	236	60.7852	60.7862
SL 55 WD XL	62.5	55	113	34	10	90	236	60.7853	60.7863
SL 70 WD XL	78	70	113	50	10	105	236	60.7854	60.7864
SL 82 WD XL	90	82	113	60	10	115	236	60.7855	60.7865
SL100 WD XL	108	100	113	75	10	135	236	60.7856	60.7866
SL 125 WD XL	134	125	113	100	10	160	236	60.7857	60.7867
SL 150 WD XL	159	150	113	125	10	185	236	60.7858	60.7868

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN SLIPSIL® XL-120 DOUBLE SIDED CONDUIT SLEEVES



The SLIPSIL® XL-120 double sided sealing system consists of SLIPSIL® XL-120 sealing plugs with a length of 120 mm and SLIPSIL® WD XL conduit sleeves with a length of 236 mm with a 10 mm thick shoulder/welding flange in the centre of the conduit sleeve. The system has been developed to enable standardizing pipe/cable transits with a view to cope with all regulatory requirements - FTP/SOLAS/A-0 - on board vessels, avoiding the risk of making mistakes with the necessary conduit lengths. Furthermore, the mechanical stability and tightness ratings are exceptionally high due to the precise fitting parts. No corrosion inside the transits and a service life exceeding 20 years, guarantee for long term functionality with regards to fire and water tightness.

INSTALLATION INSTRUCTIONS FLANGED, BOLTED SLIPSIL® CONDUIT SLEEVES WITH SLIPSIL® XL-120 SEALING PLUGS



FLANGED CONDUIT SLEEVE FOR ONE SIDED INSTALLATION

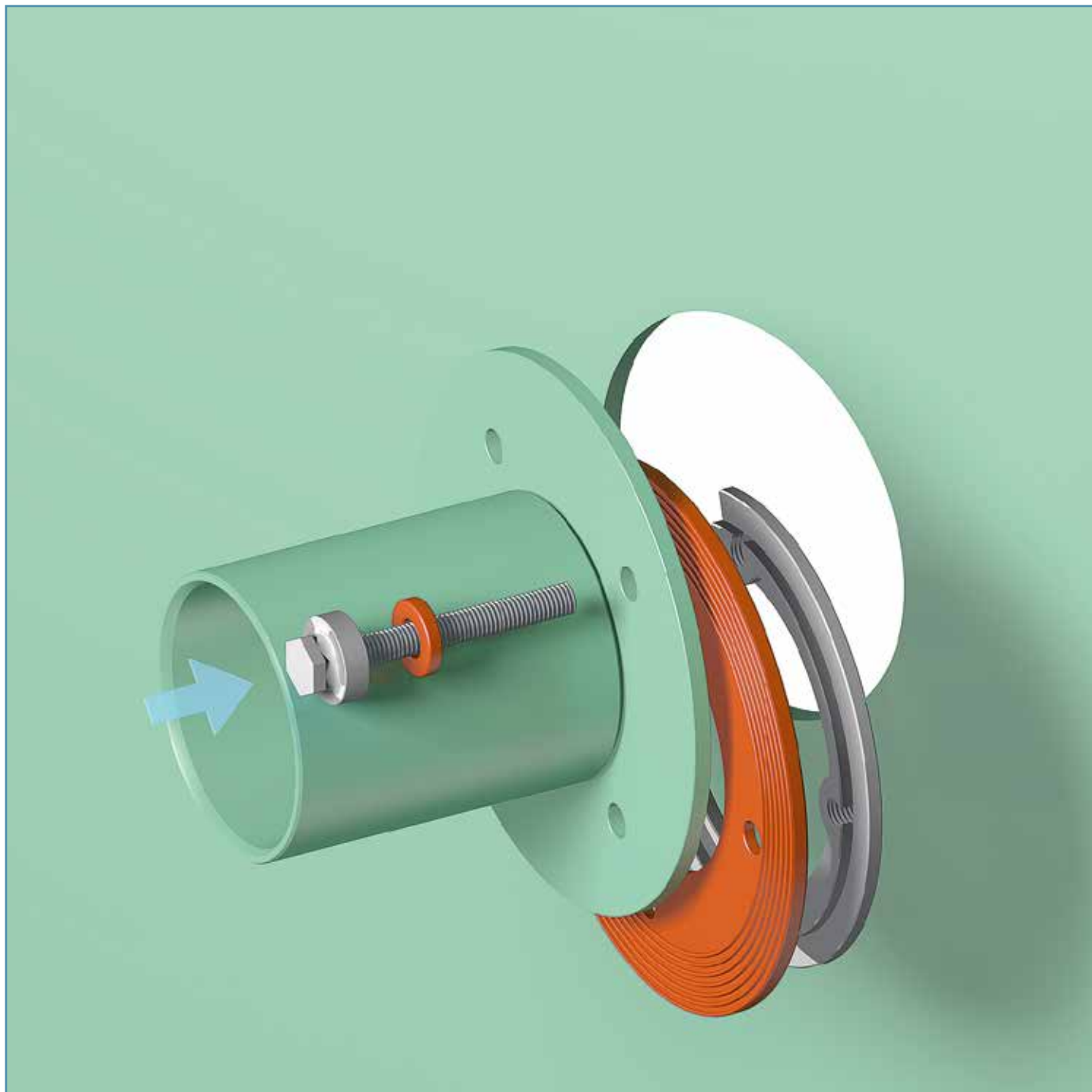
SL 41 NW-XL	max. OD ducted pipe 20	art. no. 60.7802
SL 55 NW-XL	max. OD ducted pipe 28	art. no. 60.7803
SL 70 NW-XL	max. OD ducted pipe 42	art. no. 60.7804
SL 82 NW-XL	max. OD ducted pipe 54	art. no. 60.7805
SL 100 NW-XL	max. OD ducted pipe 64	art. no. 60.7806
SL 125 NW-XL	max. OD ducted pipe 88.9	art. no. 60.7807
SL 150 NW-XL	max. OD ducted pipe 114.3	art. no. 60.7808

This image shows an exploded view of a mechanical assembly. The components are color-coded: orange for the main housing and flange, green for the central shaft, and grey for the mounting hardware. The assembly includes a central shaft with a green cylindrical body and a green flange base. The orange housing consists of a main body with a split top and a circular flange with four mounting holes. The mounting hardware includes four grey bolts with grey washers and four grey nuts, along with four orange O-rings. The exploded view shows the components in their relative positions, ready for assembly.

40

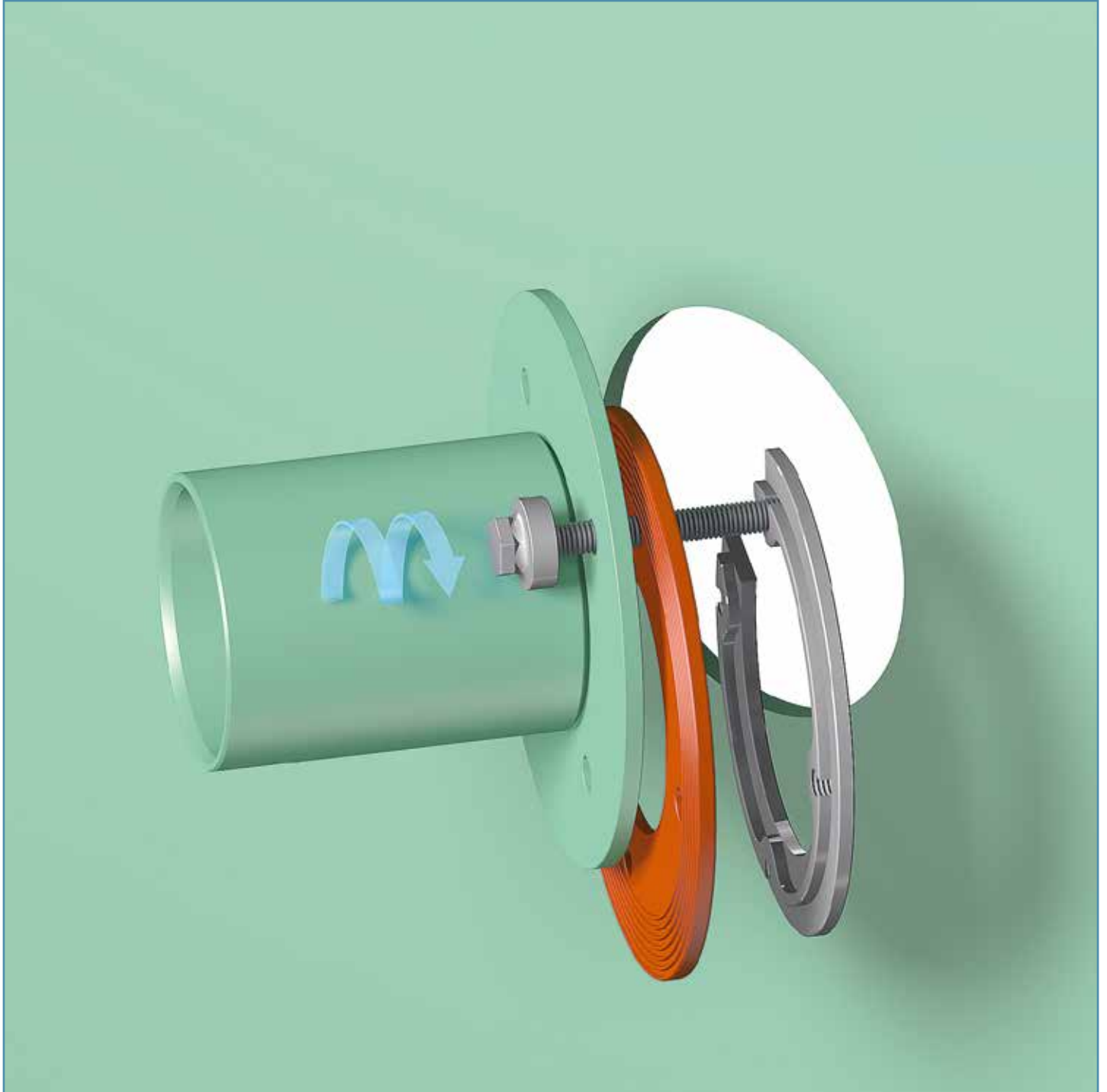


INSTALLATION INSTRUCTIONS FLANGED, BOLTED SLIPSIL® CONDUIT SLEEVES WITH SLIPSIL® XL-120 SEALING PLUGS



SLIPSIL® XL-120 sealing system for non-welding, one-sided installation composed of NW-XL flanged conduit sleeve (also available with thread for installation with the installation tool), NOFIRNO® gasket, fixation bracket and BEBOLTITE fixation bolts with sealing gasket.

INSTALLATION INSTRUCTIONS FLANGED, BOLTED SLIPSIL® CONDUIT SLEEVES WITH SLIPSIL® XL-120 SEALING PLUGS



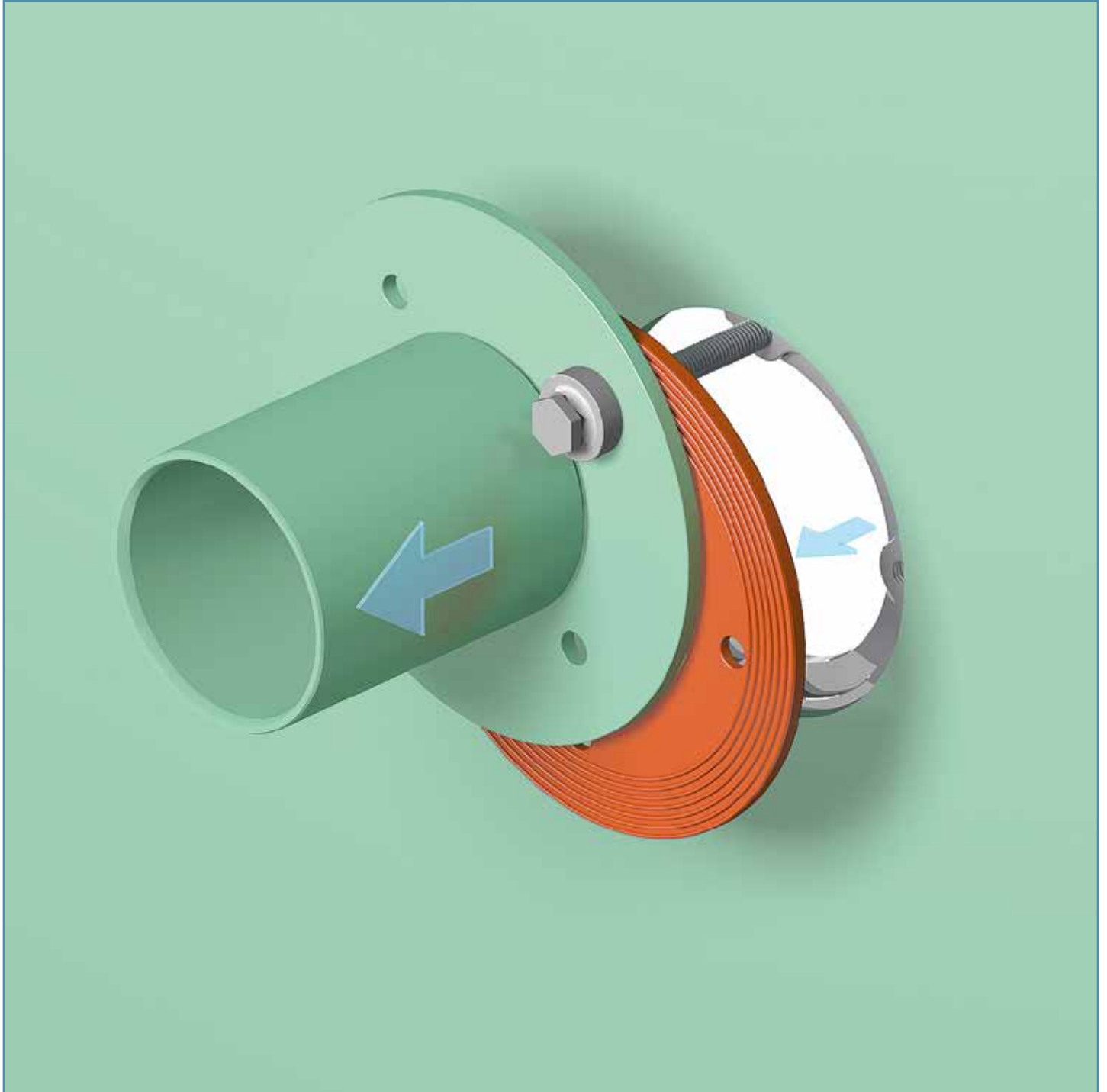
The set is assembled with one of the fixation bolts to enable insertion in the bulkhead opening.

INSTALLATION INSTRUCTIONS FLANGED, BOLTED SLIPSIL® CONDUIT SLEEVES WITH SLIPSIL® XL-120 SEALING PLUGS



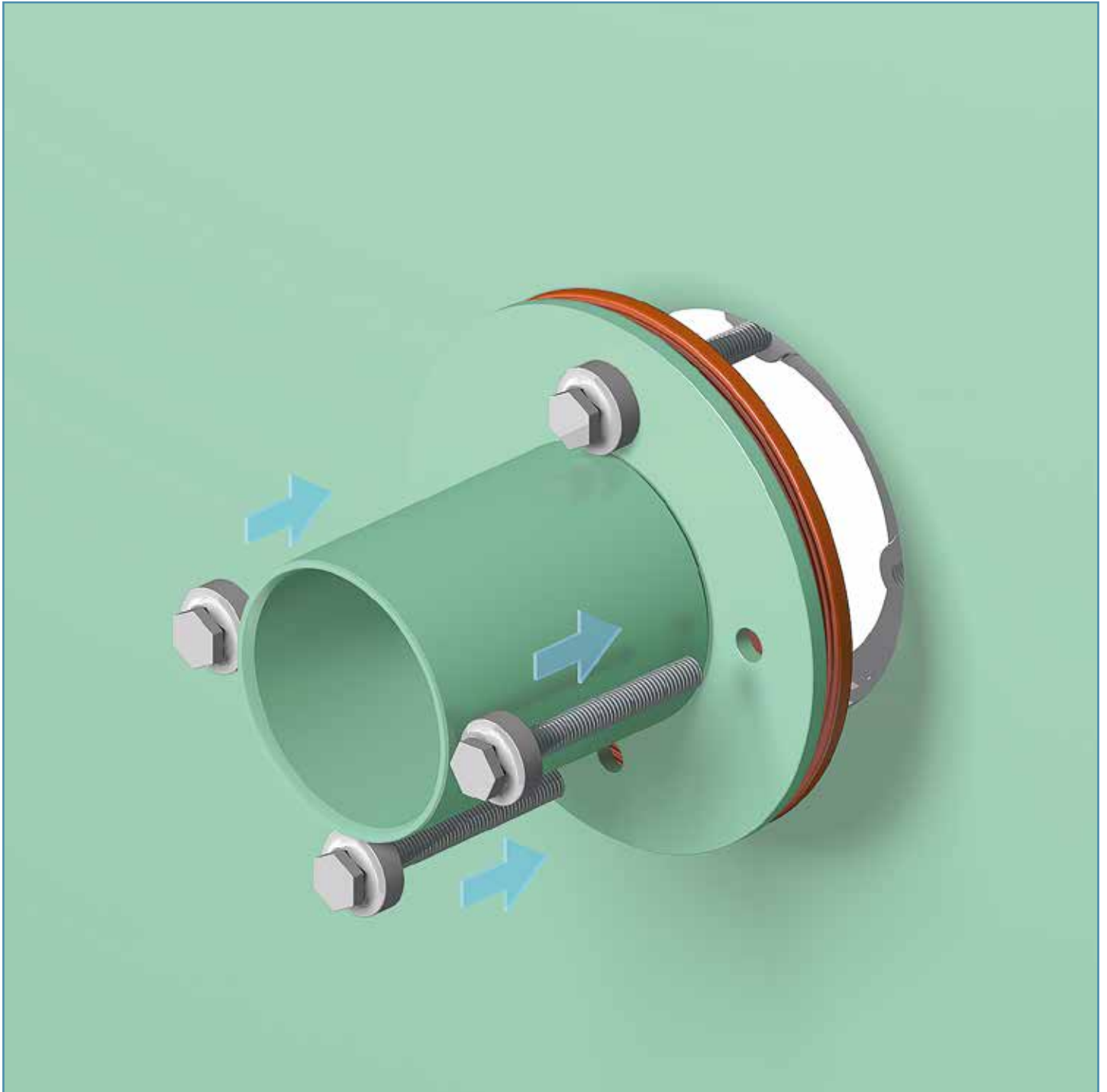
The fixation bracket is inserted in the bulkhead opening.

INSTALLATION INSTRUCTIONS FLANGED, BOLTED SLIPSIL® CONDUIT SLEEVES WITH SLIPSIL® XL-120 SEALING PLUGS



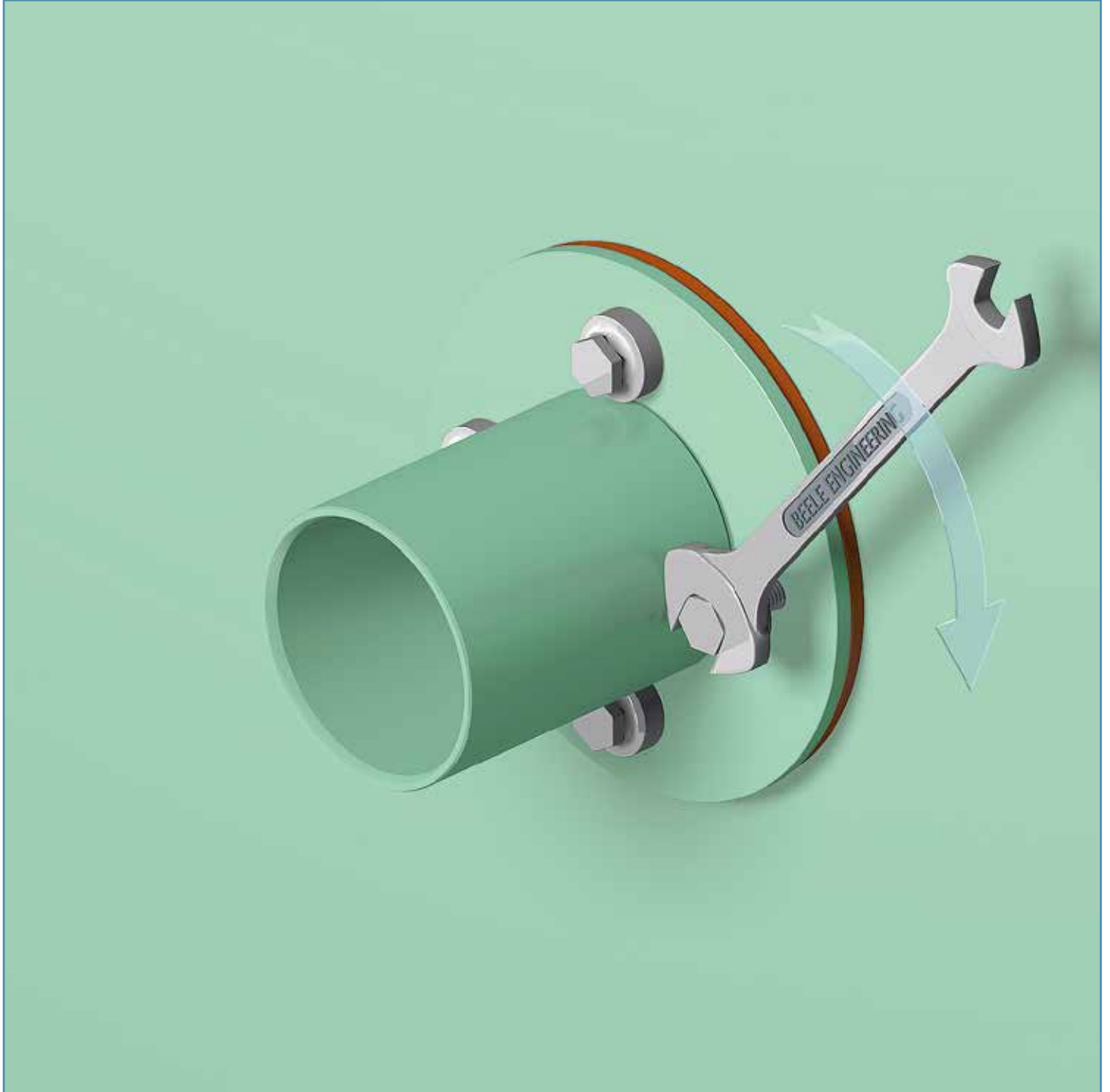
The set is then pulled back to place the fixation bracket in the opening and against the partition.

INSTALLATION INSTRUCTIONS FLANGED, BOLTED SLIPSIL® CONDUIT SLEEVES WITH SLIPSIL® XL-120 SEALING PLUGS



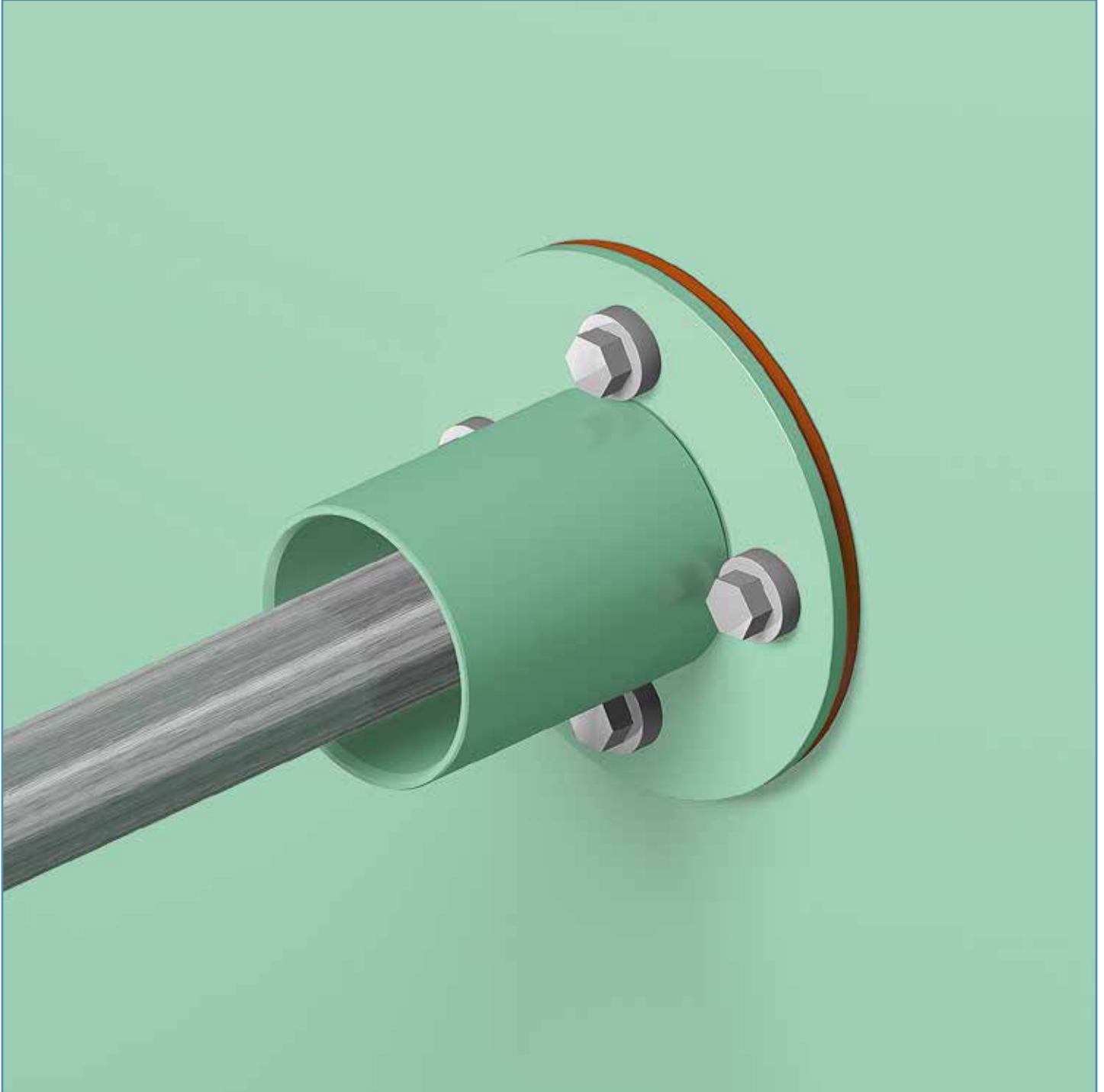
The other fixation bolts (note: with the sealing gaskets - a must for obtaining tightness) are then fixed to the fixation bracket.

INSTALLATION INSTRUCTIONS FLANGED, BOLTED SLIPSIL® CONDUIT SLEEVES WITH SLIPSIL® XL-120 SEALING PLUGS



The BEBOLTITE fixation bolts are tightened. Don't use heavy torques, as this will have a negative influence on the performance of the NOFIRNO® gasket. A torque of ca. 8 Nm is sufficient to guarantee long lasting watertight sealing of the system. Use a torque wrench to tighten the BEBOLTITE screw.

INSTALLATION INSTRUCTIONS FLANGED, BOLTED SLIPSIL® CONDUIT SLEEVES WITH SLIPSIL® XL-120 SEALING PLUGS



After installation of the SLIPSIL® NW-XL flanged conduit sleeve, the pipe/cable can be passed through. The pipe/cable has to be ducted straight and centrally through the SLIPSIL® NW-XL conduit sleeve. The shoulder (see page 29) inside the conduit sleeve prevents ducting of a pipe or cable that is too large for the proper plug series.

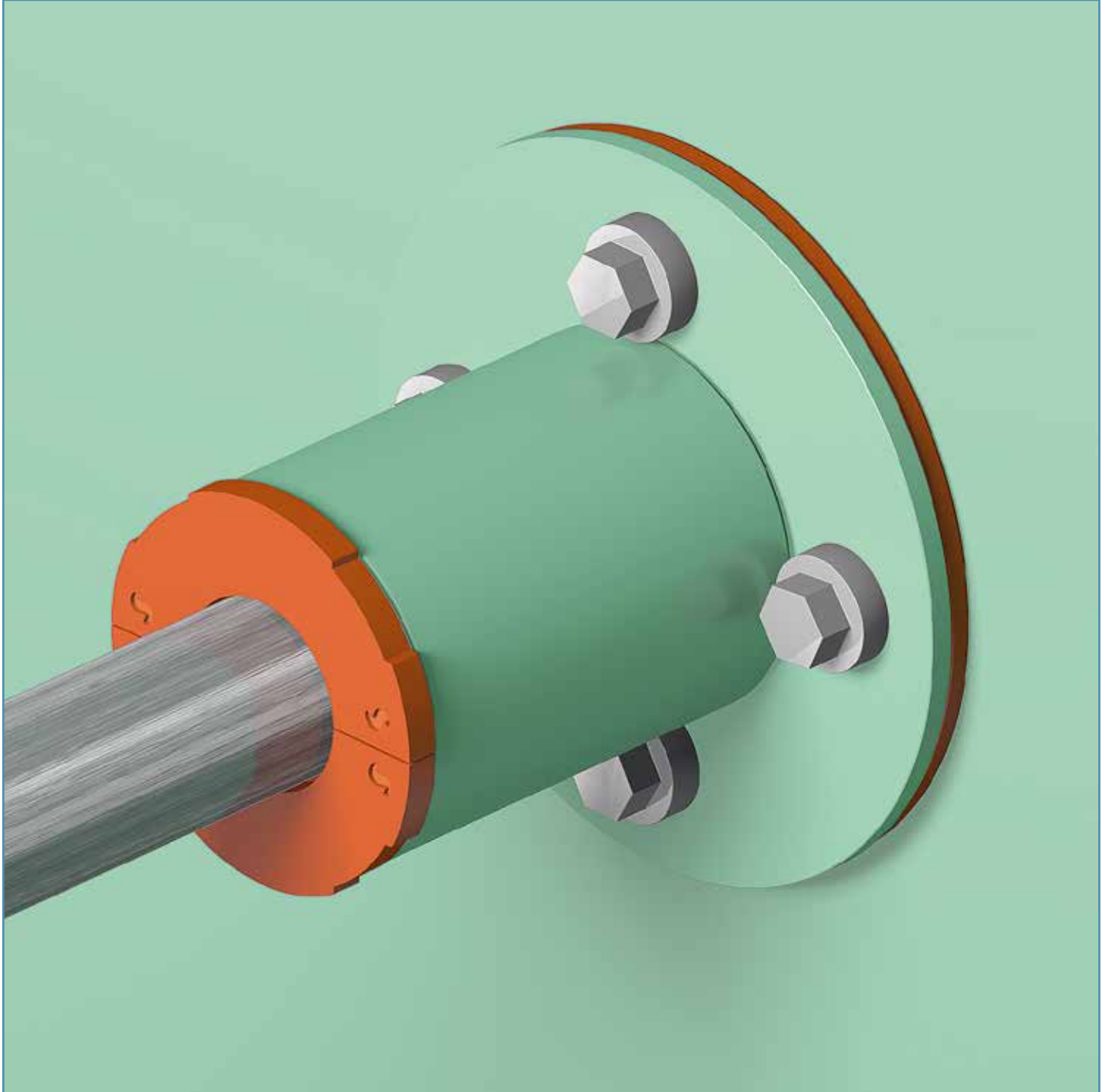
INSTALLATION INSTRUCTIONS FLANGED, BOLTED SLIPSIL® CONDUIT SLEEVES WITH SLIPSIL® XL-120 SEALING PLUGS



Before starting the installation procedure, any dirt, oil residues or corrosion should be removed from the conduit sleeve and the surface of the ducted pipe.

Follow the installation instructions of the SLIPSIL® XL-120 plugs as described on page 9-18.

INSTALLATION INSTRUCTIONS FLANGED, BOLTED SLIPSIL® CONDUIT SLEEVES WITH SLIPSIL® XL-120 SEALING PLUGS



The finished NW-XL sealing system.
No welding, ease of installation, water and gas tight, fire rated.



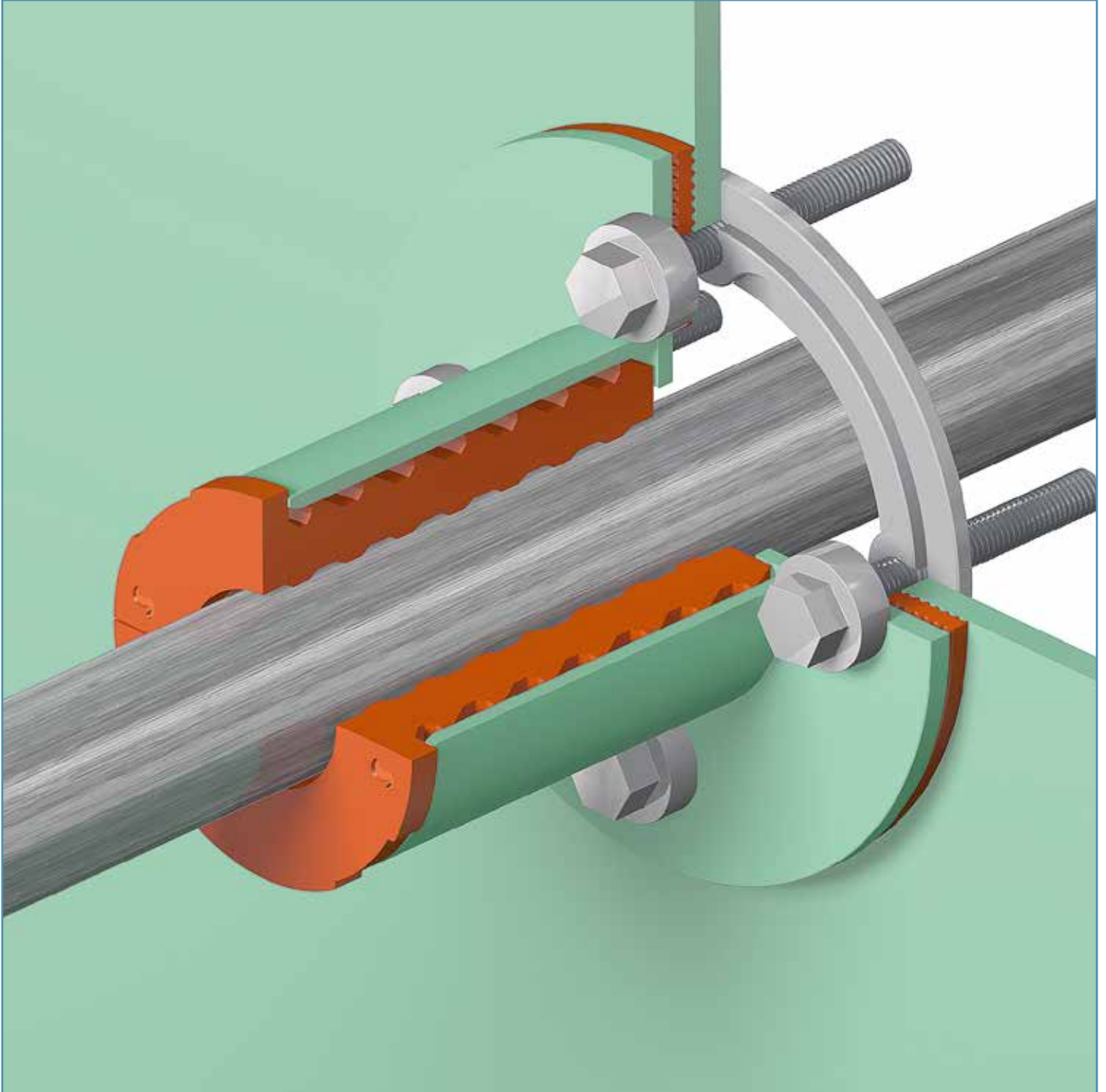
**SAFETY
SEALING
SYSTEMS**

**SAFETY
SEALING
SYSTEMS**



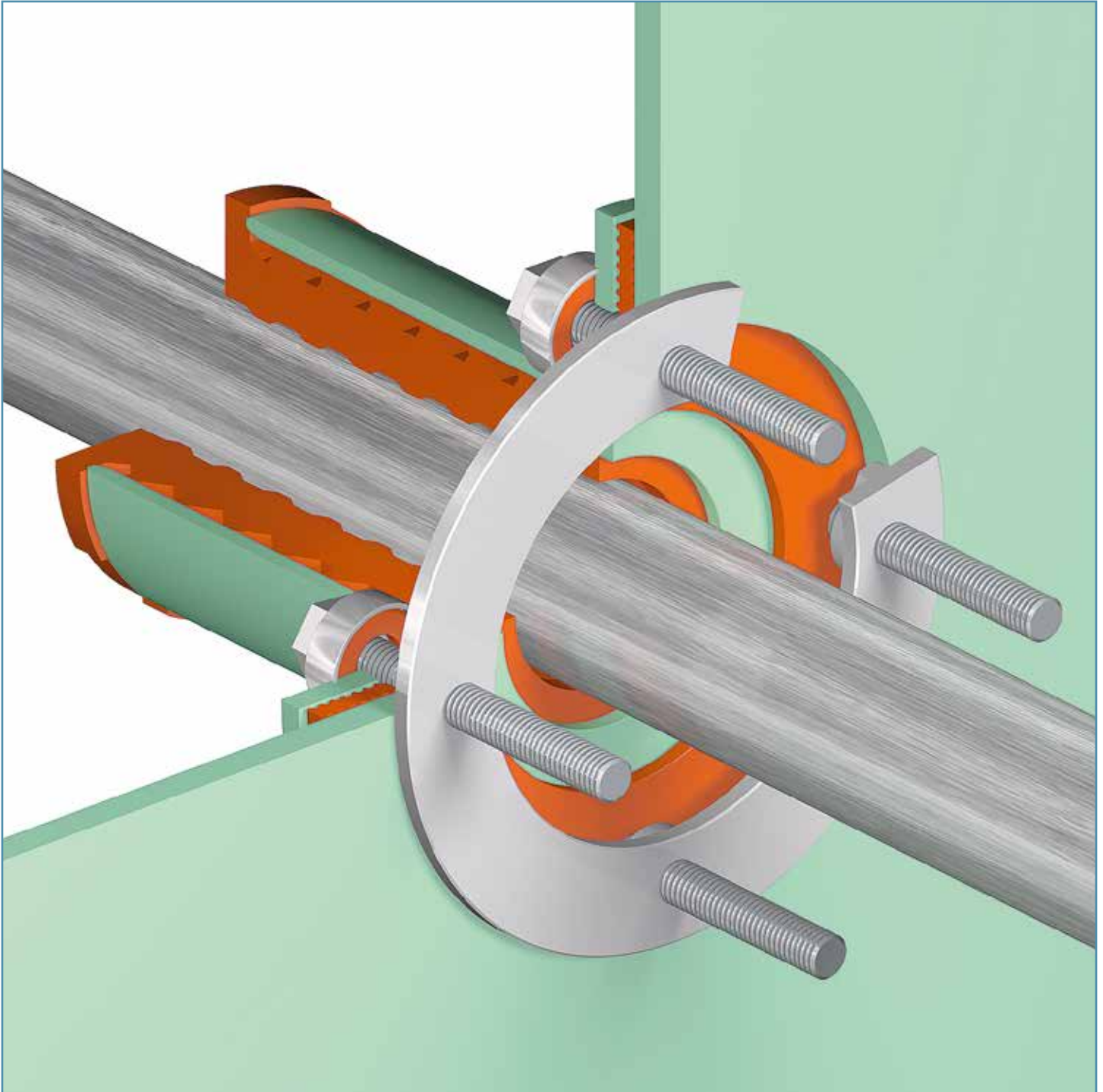
**slipsil[®]
XL-120**

INSTALLATION INSTRUCTIONS FLANGED, BOLTED SLIPSIL[®] CONDUIT SLEEVES WITH SLIPSIL[®] XL-120 SEALING PLUGS



The finished non-welding sealing system.

INSTALLATION INSTRUCTIONS FLANGED, BOLTED SLIPSIL® CONDUIT SLEEVES WITH SLIPSIL® XL-120 SEALING PLUGS

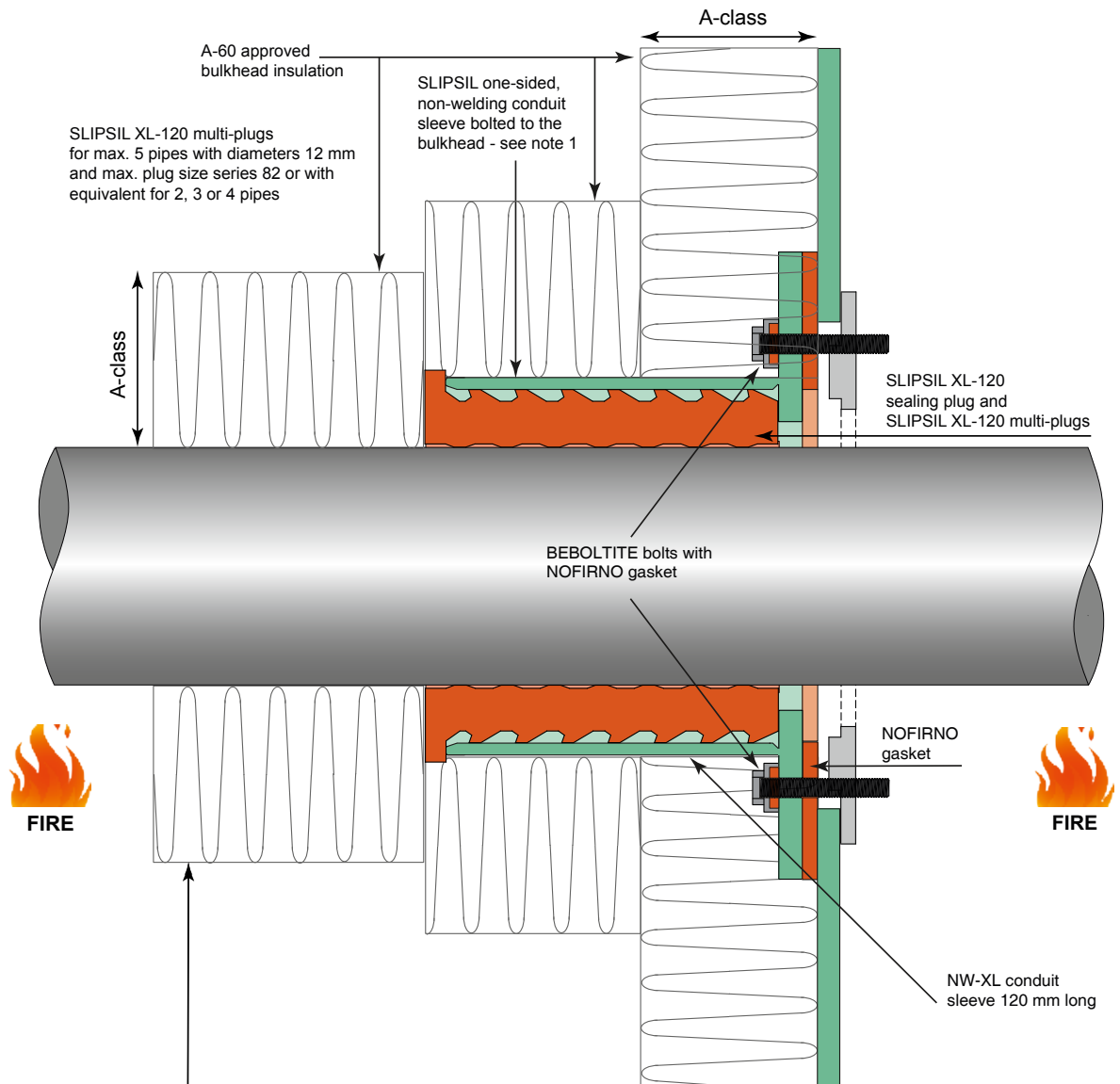


View from the back side of the finished non-welding sealing system.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN CENTRICALLY INSTALLED CONDUIT SLEEVES

direction of exposure:
fire from either side

SLIPSIL XL-120 PLUG SEALING SYSTEM for
steel/ss/Cu/CuNi pipes
min. 0.125" - max. 4" NPS



length of Insulation around ducted pipe:

steel/ss/CuNi pipes		copper	
up to 1"	none	up to 1"	200 mm
>1" up to 3"	300 mm	>1" up to 2"	500 mm
>3" up to 6"	450 mm	>2" up to 4"	800 mm
		4"	1000 mm

**conduit sleeve positioned
on unexposed side**

**NOTE 1: also applicable for one sided
bolted and welded conduit sleeves**



Description: SLIPSIL XL-120 plug sealing system for A-60 class bulkheads

Mat.: NOFIRNO rubber

Ref.: JAB

Date:

22-01-2018

Scale:

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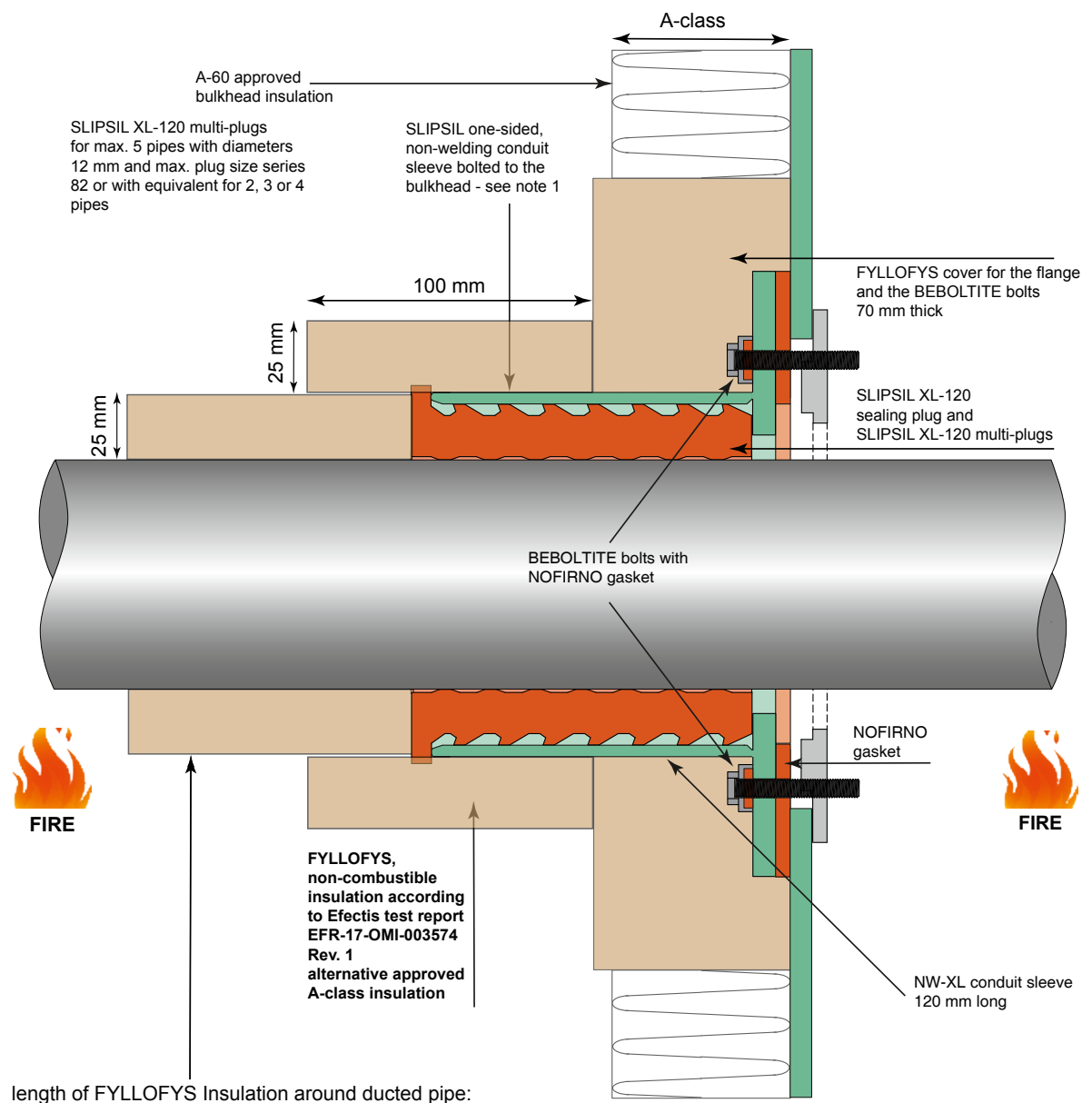
Rev. 2

SLX 054E

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS IN CENTRICALLY INSTALLED CONDUIT SLEEVES

direction of exposure:
fire from either side

SLIPSIL XL-120 PLUG SEALING SYSTEM for
steel/ss/Cu/CuNi pipes
min. 0.125" - max. 4" NPS



length of FYLLOFYS Insulation around ducted pipe:

steel/ss/CuNi pipes		copper	
up to 1"	none	up to 1"	200 mm
>1" up to 3"	300 mm	>1" up to 2"	500 mm
>3" up to 6"	450 mm	>2" up to 4"	800 mm
		4"	1000 mm

conduit sleeve positioned
on unexposed side

NOTE 1: also applicable for one sided
bolted and welded conduit sleeves



Description: SLIPSIL XL-120 plug sealing system for A-60 class bulkheads

Mat.: NOFIRNO rubber/FYLLOFYS insulation

Ref.: JAB

Date:

22-01-2018

Scale:

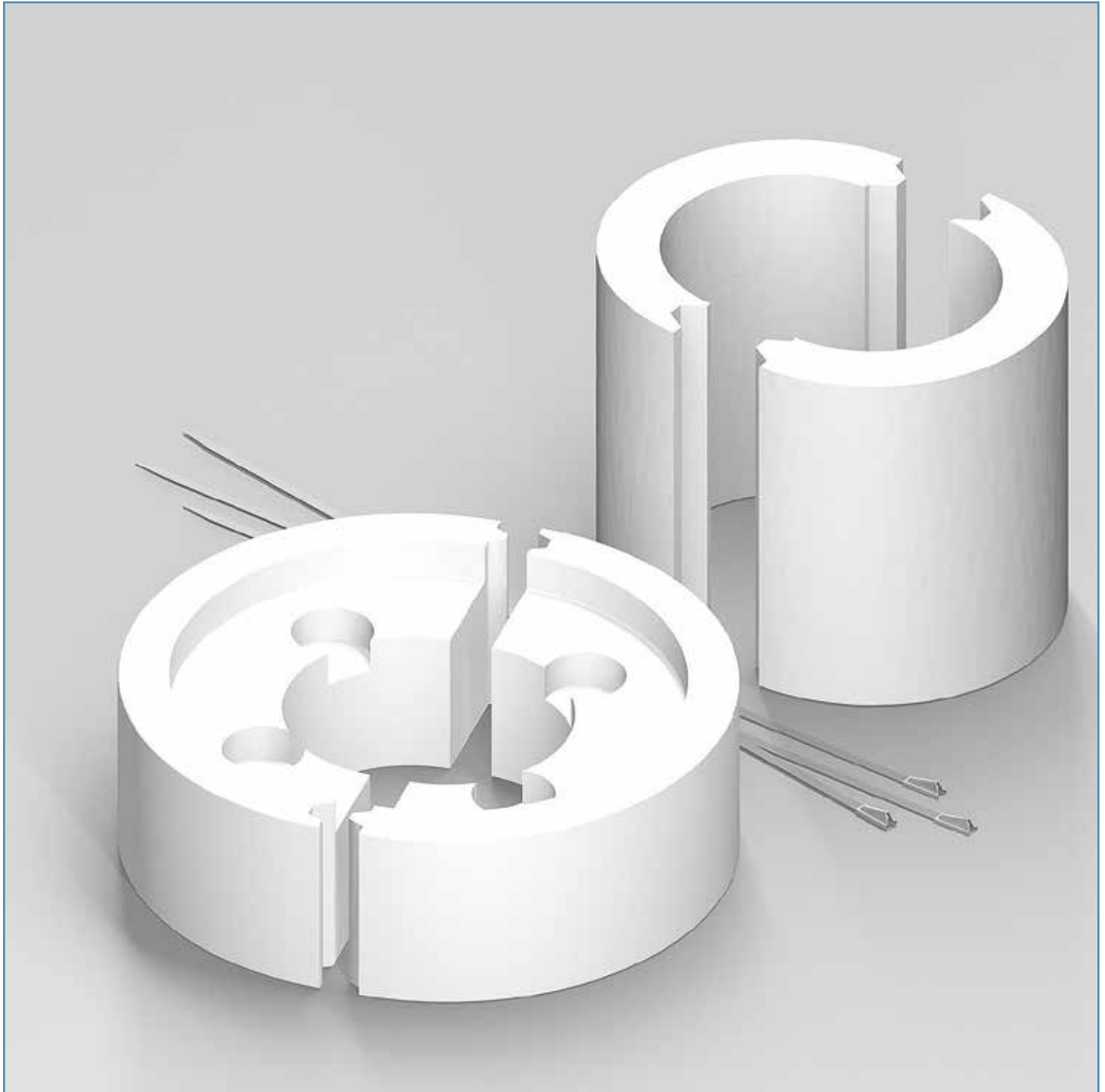
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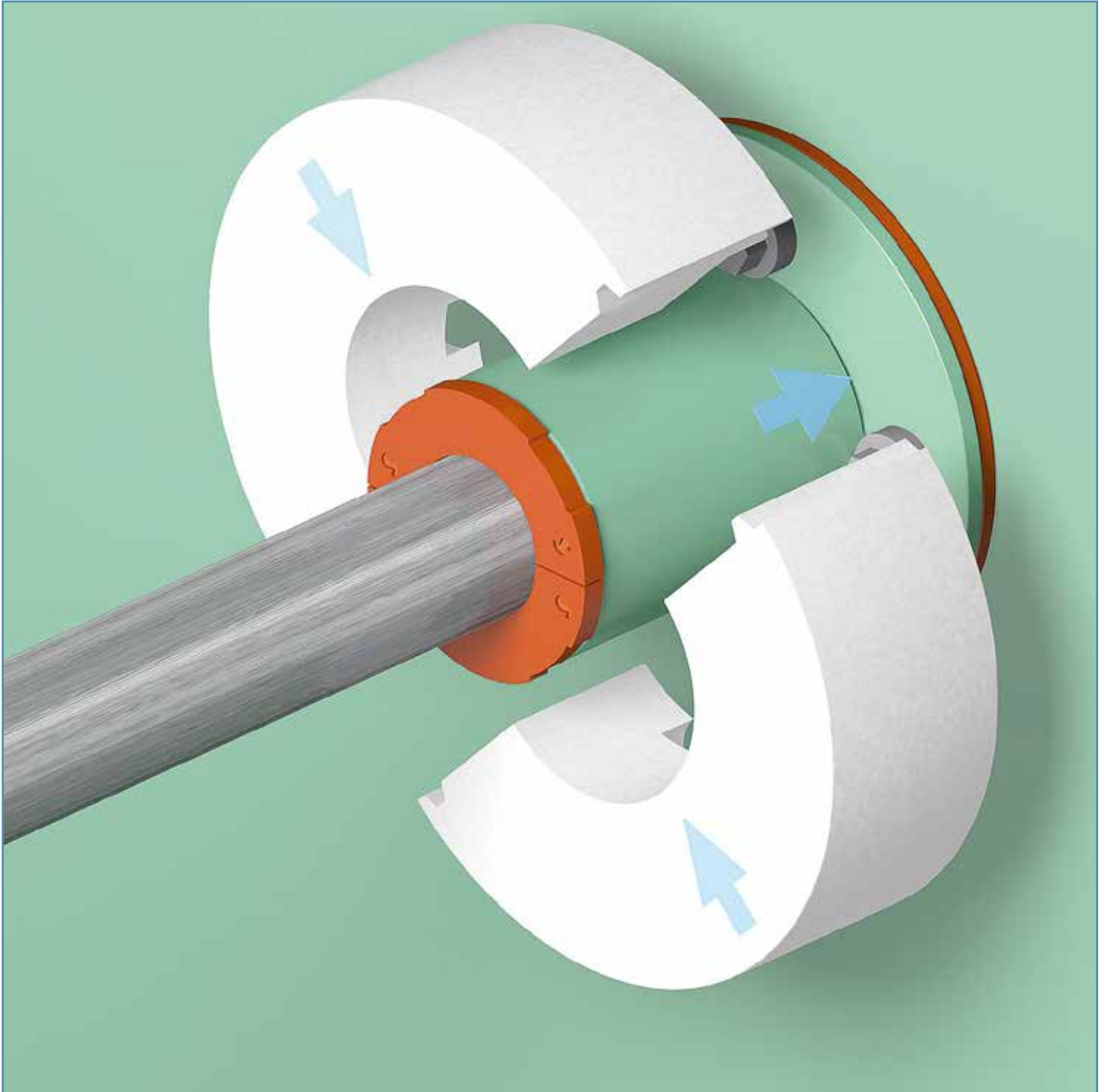
SLX 055E

INSTALLATION INSTRUCTIONS FLANGED, BOLTED SLIPSIL® CONDUIT SLEEVES WITH SLIPSIL® XL-120 SEALING PLUGS



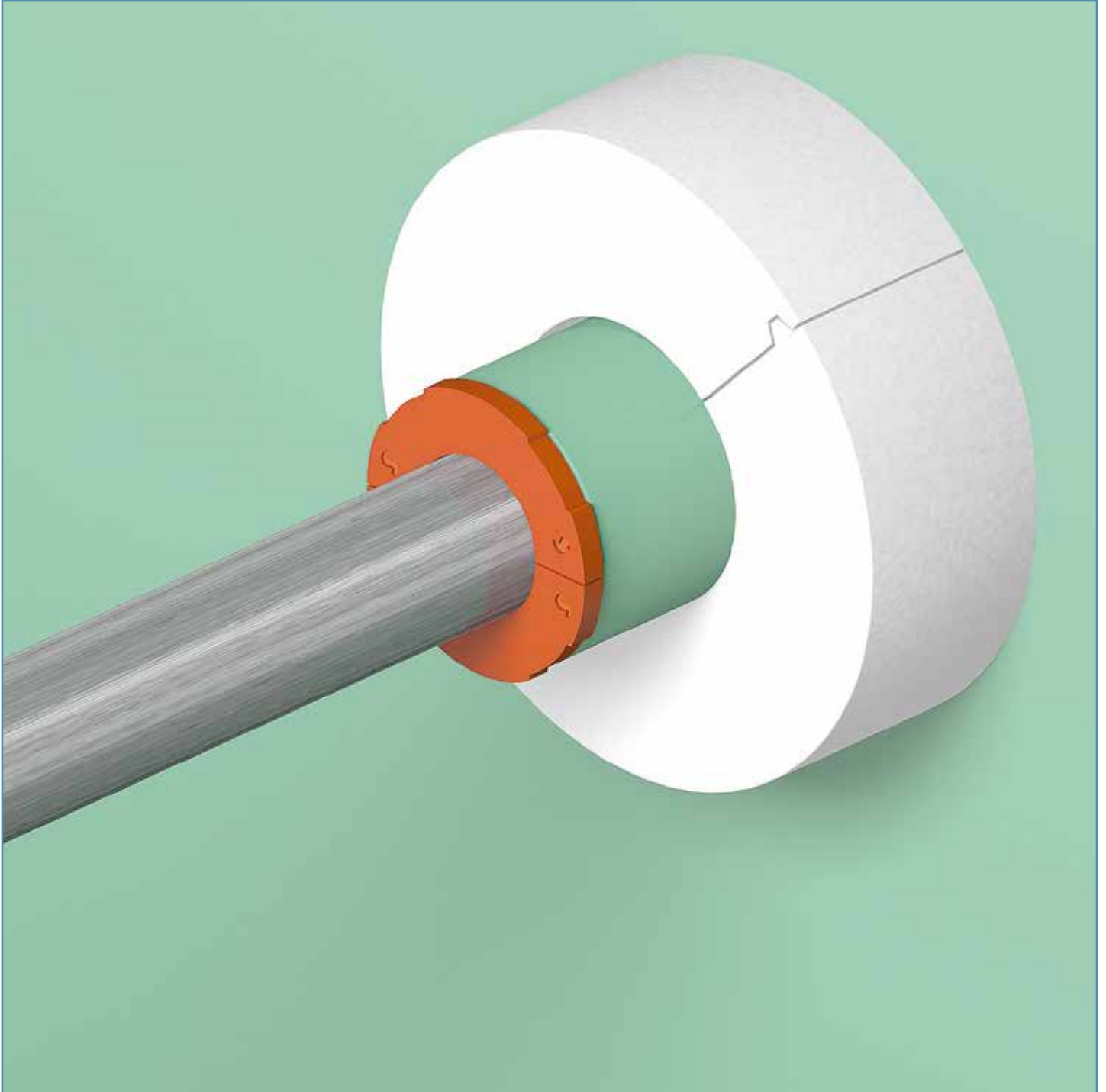
A-60 class penetrations require insulation of the transit to prevent a temperature rise of 180 °C on the non-exposed side of the partition. Generally this is done with fibre mats. However, besides the loose fiber mats not being easy to apply around rounded surfaces, working with these fibre mats is not pleasant either. For this reason FYLLOFYS® thermal insulation products are developed fitting around the conduit sleeves. FYLLOFYS® thermal insulation is non-combustible. Tested according FTP code 2010 - Part 1 and ISO 1182:2010. Test report EFR-17-OMI-003574 of Efectis France.

INSTALLATION INSTRUCTIONS FLANGED, BOLTED SLIPSIL® CONDUIT SLEEVES WITH SLIPSIL® XL-120 SEALING PLUGS



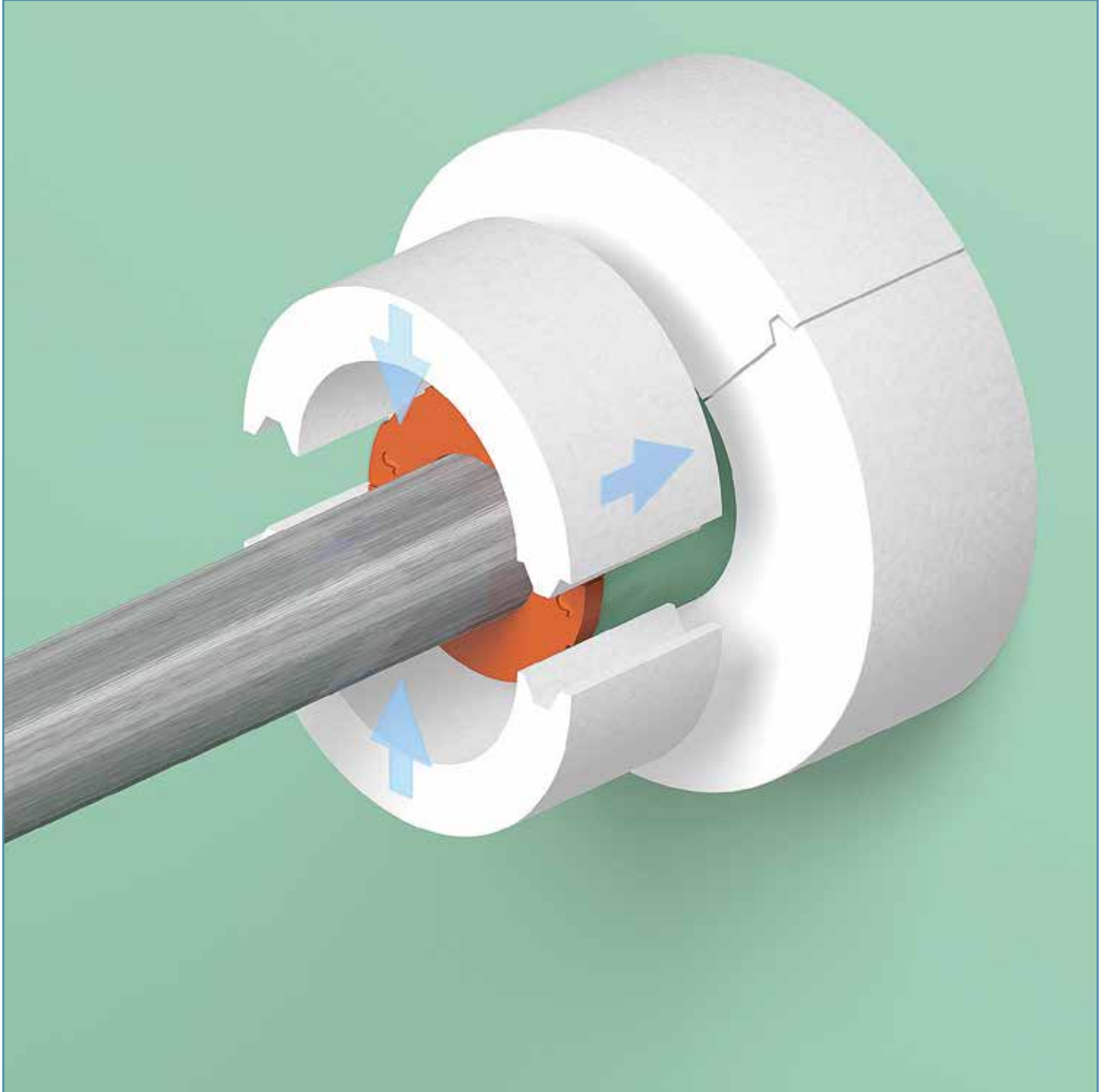
The FYLLOFYS® thermal insulation products are moulded and coated with FISSIC® coating. FISSIC® coating is A2 classed (not significantly contributing to the fire load and fire growth. no smoke, no drop-lets). Warrington report 18250B. MED certificate 39278/B0 EC for low flame spread characteristics. The so-called FYLLOFYS® “cover hat” is delivered in two parts and is placed over the bolts and the flange of the conduit sleeve.

INSTALLATION INSTRUCTIONS FLANGED, BOLTED SLIPSIL® CONDUIT SLEEVES WITH SLIPSIL® XL-120 SEALING PLUGS



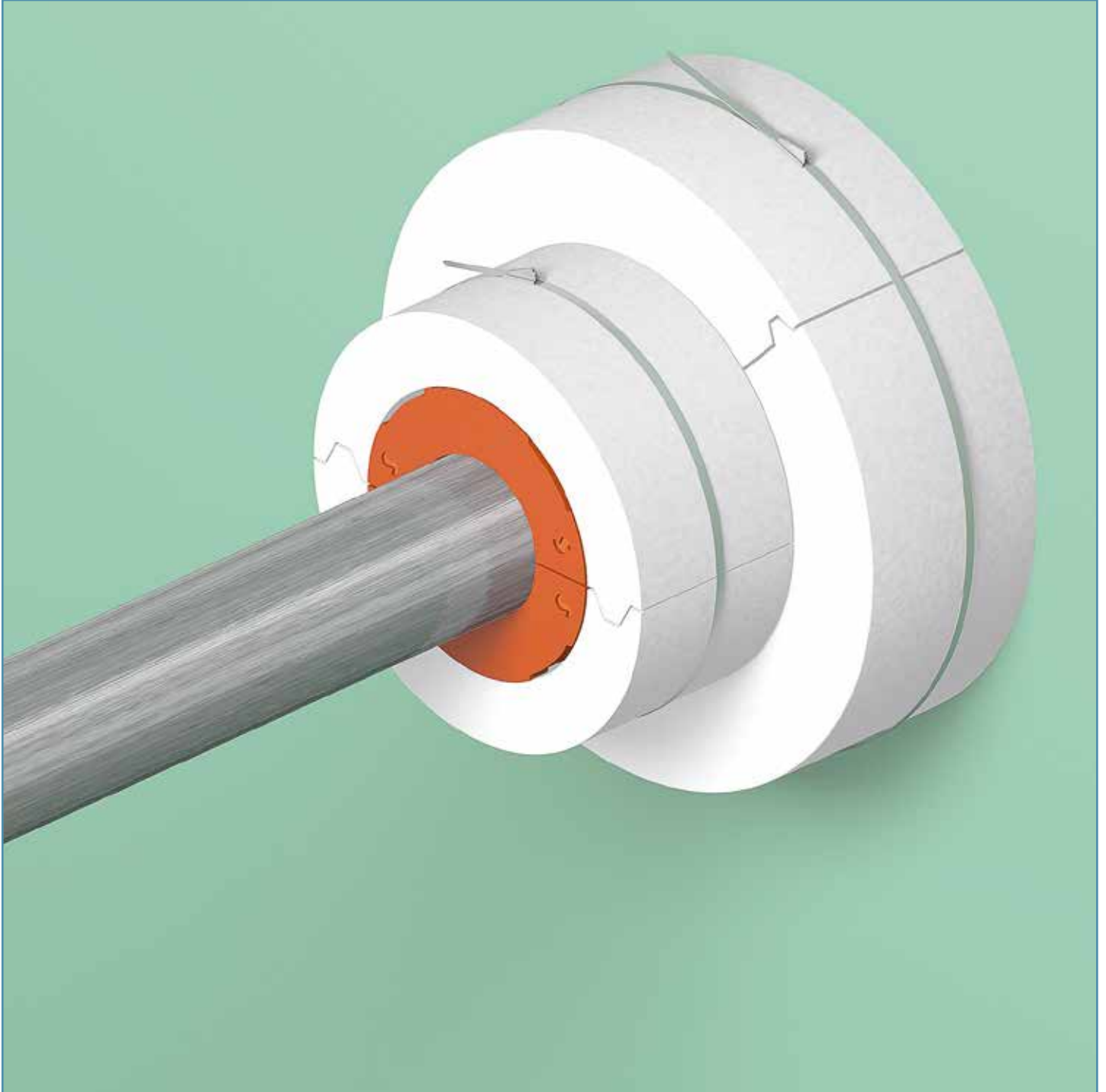
The FYLLOFYSS® “cover hat” placed over the flange against the partition.

INSTALLATION INSTRUCTIONS FLANGED, BOLTED SLIPSIL® CONDUIT SLEEVES WITH SLIPSIL® XL-120 SEALING PLUGS



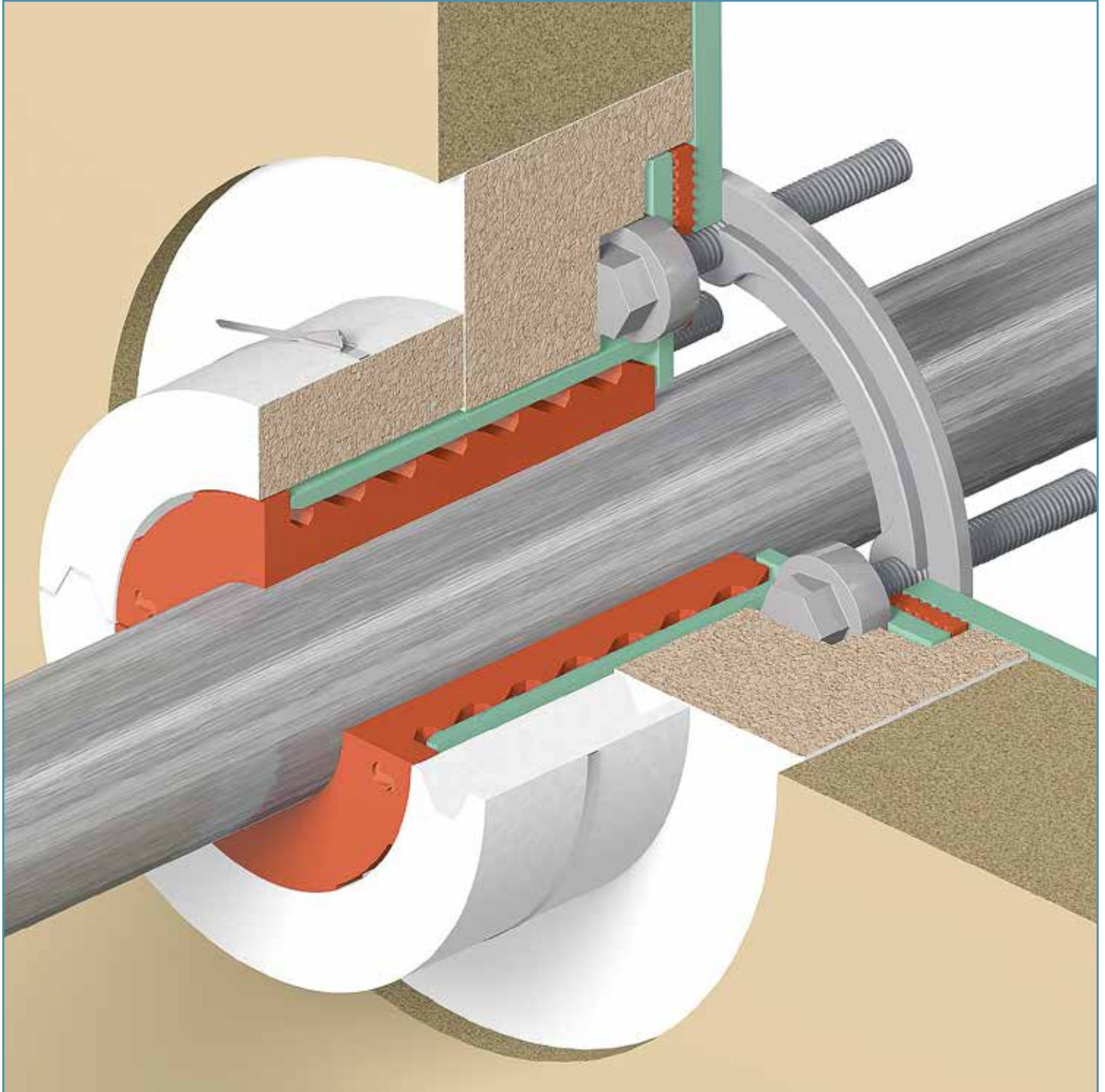
Then FYLLOFYS® thermal insulation shells are placed in front of the “cover hat” around the conduit sleeve and SLIPSIL® XL-120 plug.

INSTALLATION INSTRUCTIONS FLANGED, BOLTED SLIPSIL® CONDUIT SLEEVES WITH SLIPSIL® XL-120 SEALING PLUGS



The FYLLOFYS® “cover hat” and shells should be tightened with steel jubilee clips.

INSTALLATION INSTRUCTIONS FLANGED, BOLTED SLIPSIL® CONDUIT SLEEVES WITH SLIPSIL® XL-120 SEALING PLUGS



The finished pipe transits for fire exposure from either side.
The installation is quick and easy. After finishing, it is also more easy to install the regular A-60 class fiber mats around the unit against the steel partition

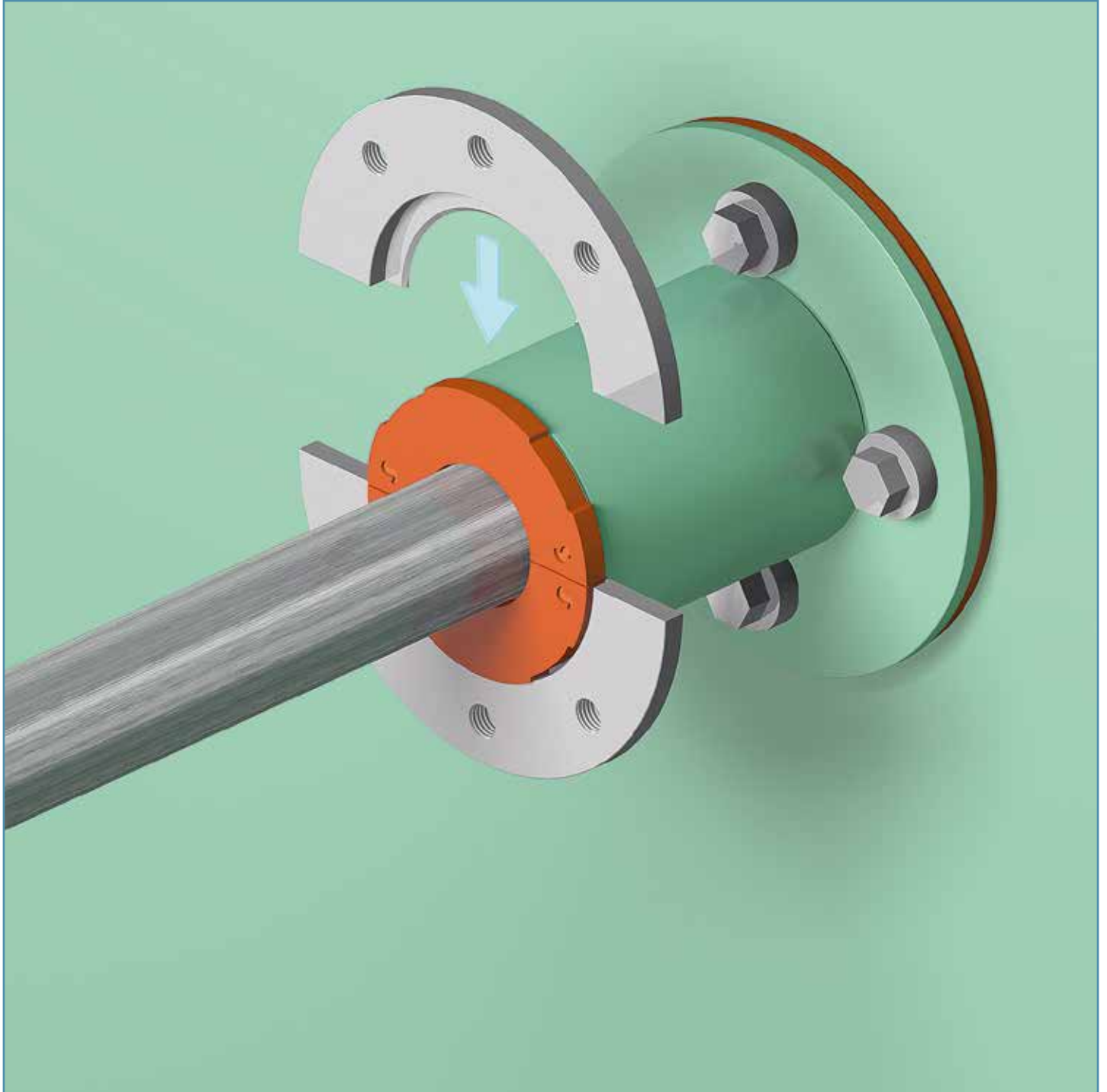
DE-INSTALLATION INSTRUCTIONS OF SLIPSIL® XL-120 AND STANDARD SLIPSIL® SEALING PLUGS



A de-installation tool is developed for ease of extraction the SLIPSIL® (XL-120) sealing plugs out of the conduit sleeves. The de-installation tool consists of a clamping ring with shoulder, a contra-clamping ring, a de-compression device and threaded ends.

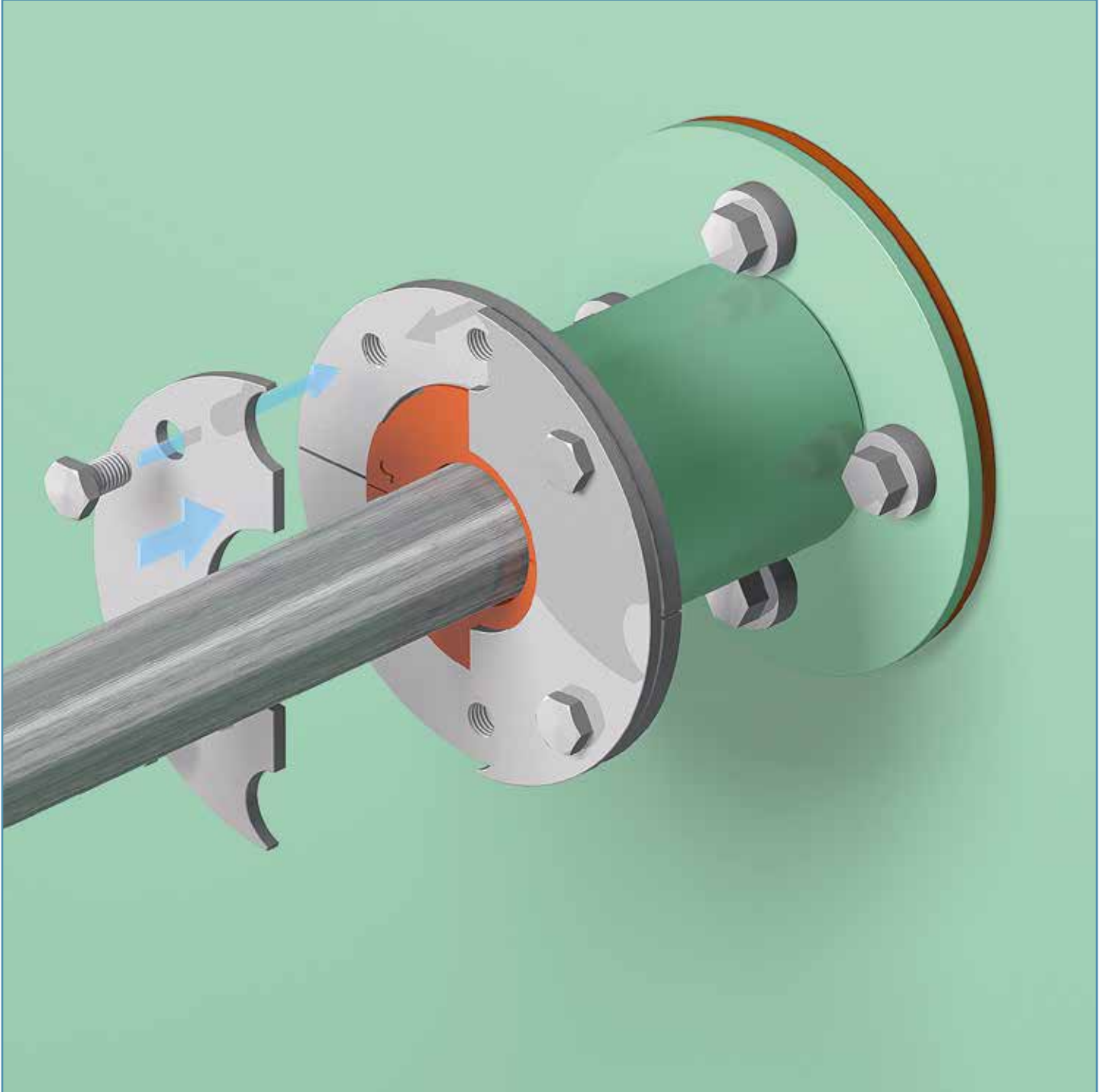
The de-installation tool can be used for extraction of the SLIPSIL® and SLIPSIL® XL-120 sealing plugs out of the standard and non-welding SLIPSIL® conduit sleeves up to the 150 series.

DE-INSTALLATION INSTRUCTIONS OF SLIPSIL® XL-120 AND STANDARD SLIPSIL® SEALING PLUGS



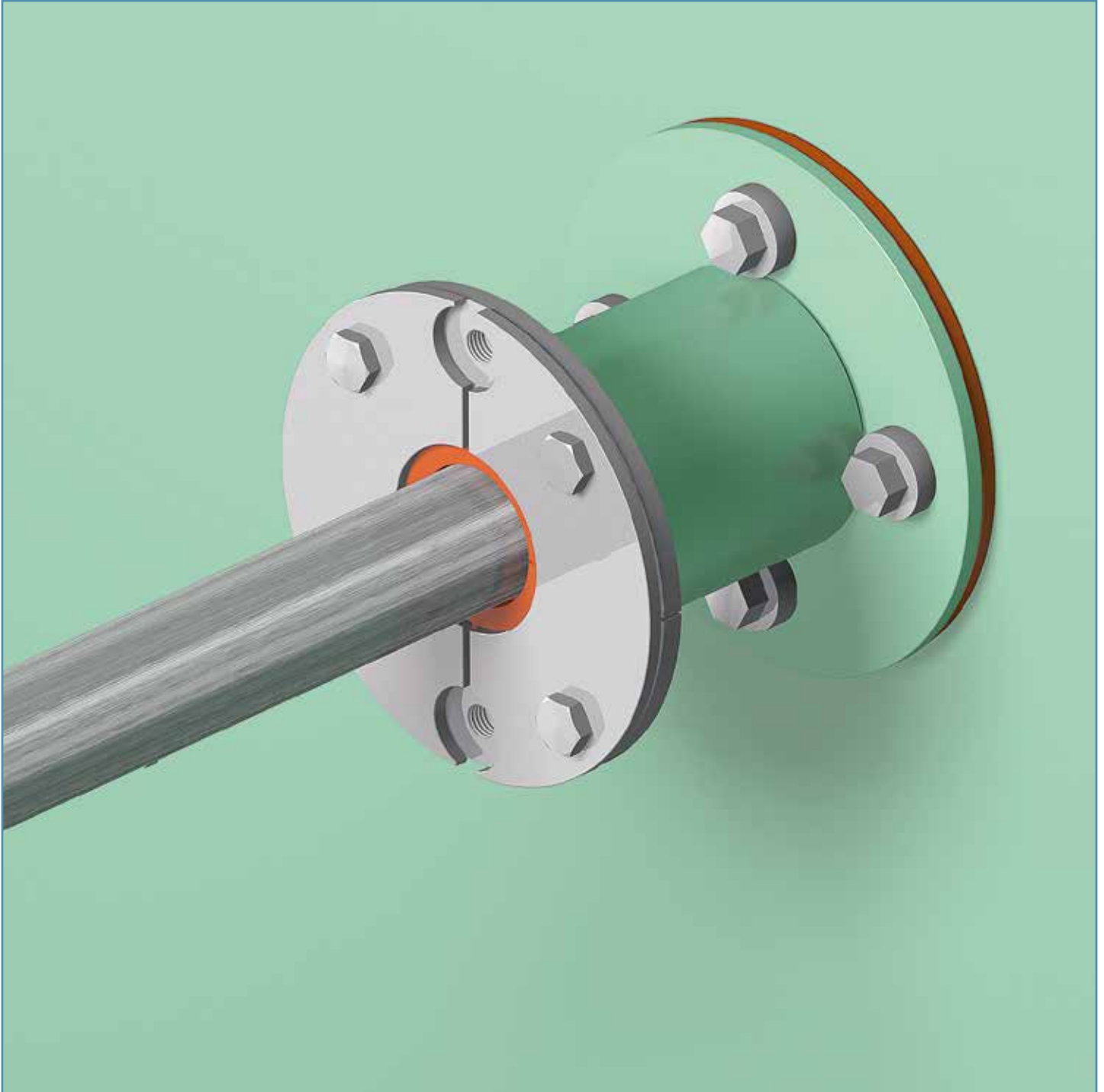
Place the clamping ring with the shoulder between the flange of the SLIPSIL® sealing plug and the conduit sleeve.

DE-INSTALLATION INSTRUCTIONS OF SLIPSIL® XL-120 AND STANDARD SLIPSIL® SEALING PLUGS



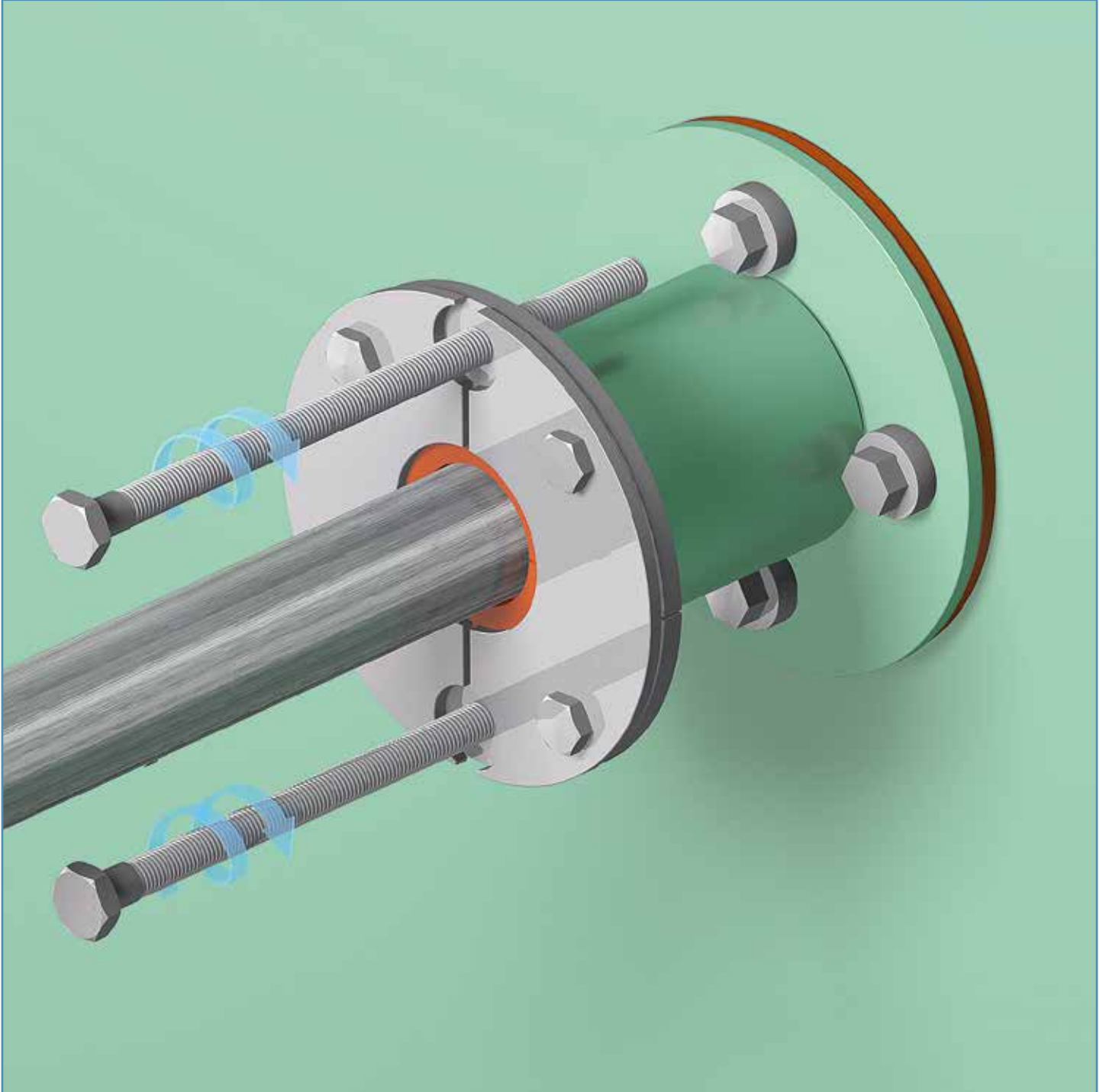
The contra-clamping ring is fixed onto the clamping ring with shoulder.

DE-INSTALLATION INSTRUCTIONS OF SLIPSIL® XL-120 AND STANDARD SLIPSIL® SEALING PLUGS



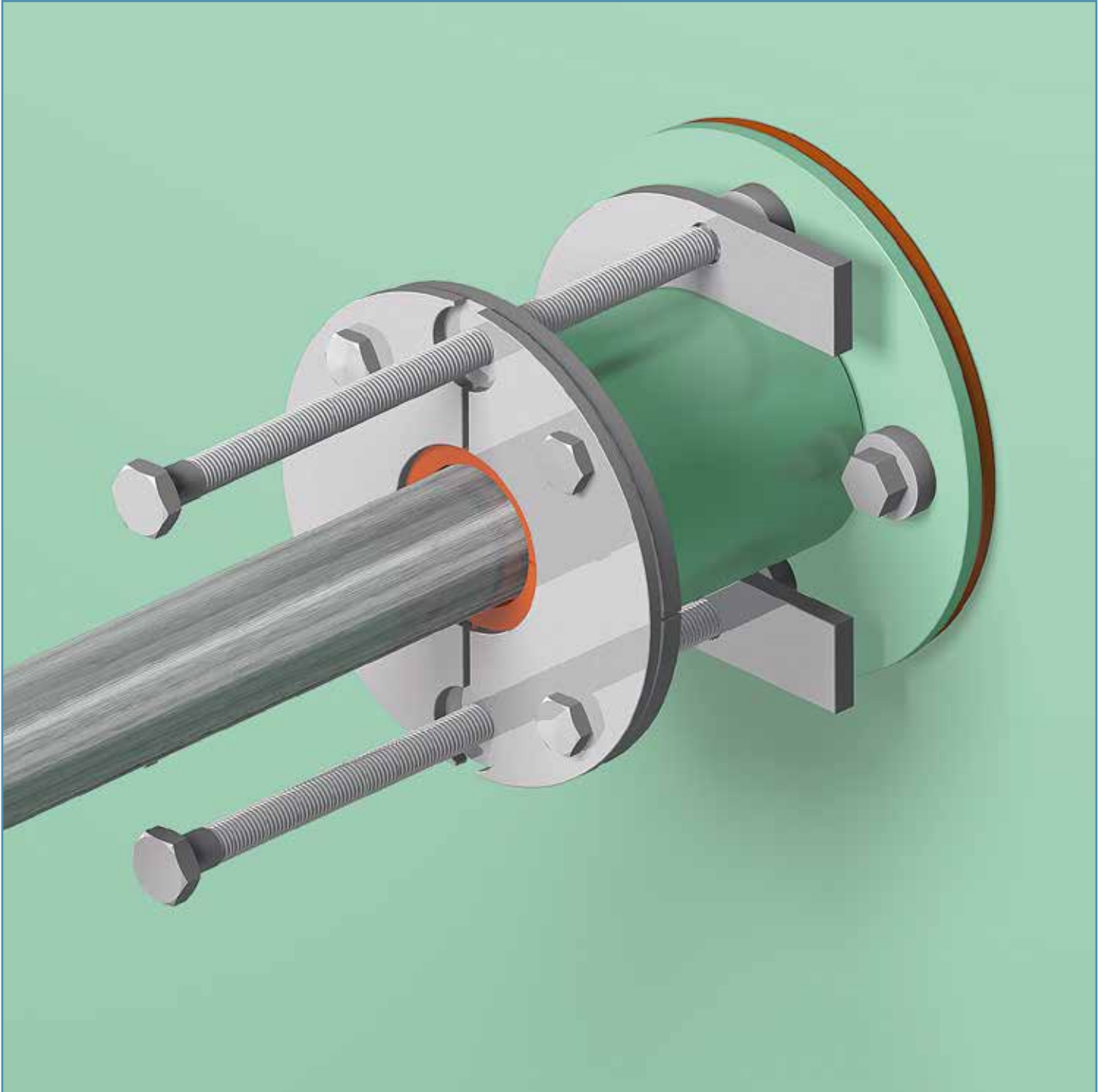
The clamping unit encloses the flange of the SLIPSIL® sealing plug.

DE-INSTALLATION INSTRUCTIONS OF SLIPSIL® XL-120 AND STANDARD SLIPSIL® SEALING PLUGS



The long bolts are installed.

DE-INSTALLATION INSTRUCTIONS OF SLIPSIL® XL-120 AND STANDARD SLIPSIL® SEALING PLUGS



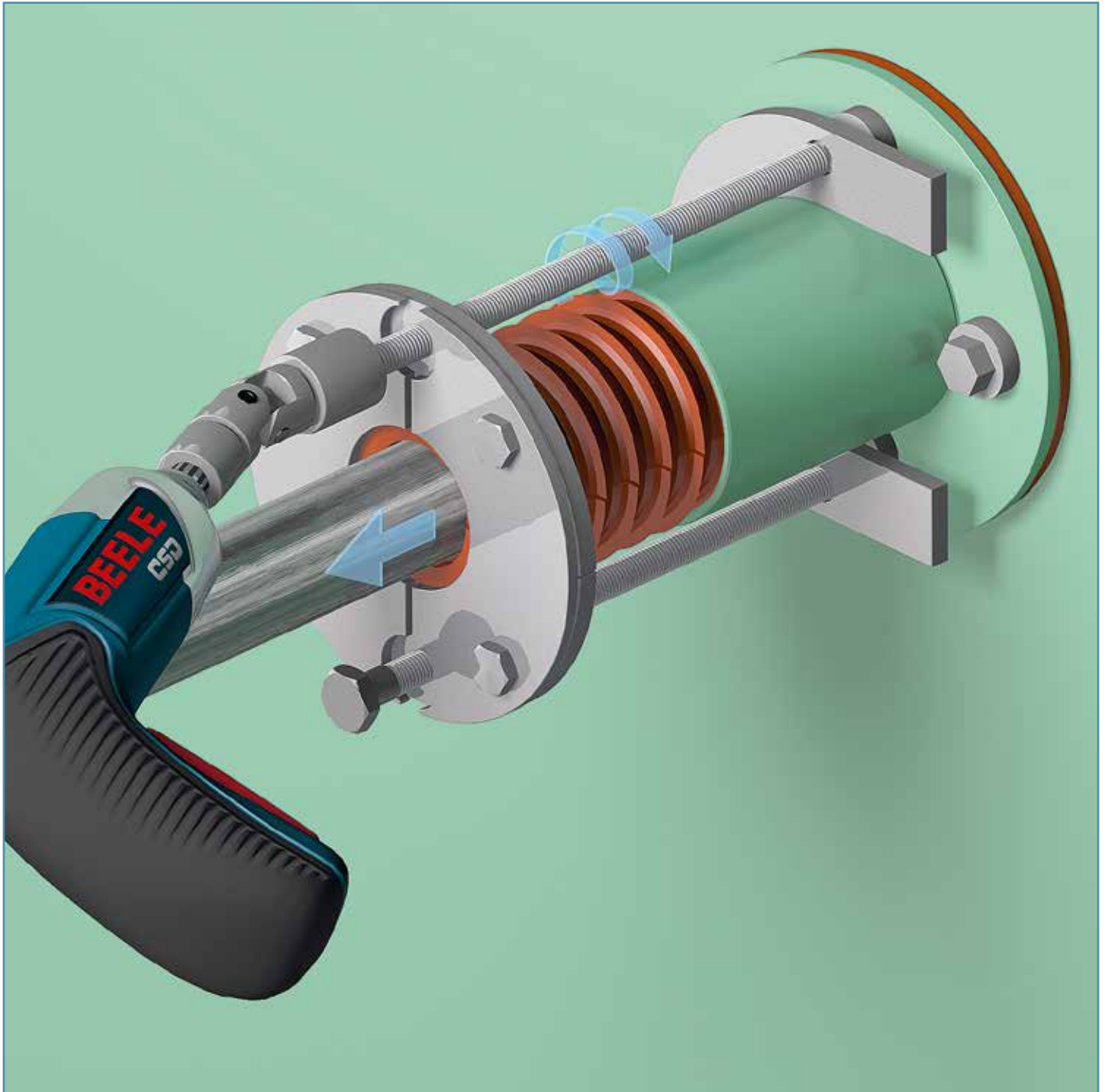
The de-compression device is installed to prevent damage to the conduit sleeve or bulkhead/deck.

DE-INSTALLATION INSTRUCTIONS OF SLIPSIL® XL-120 AND STANDARD SLIPSIL® SEALING PLUGS



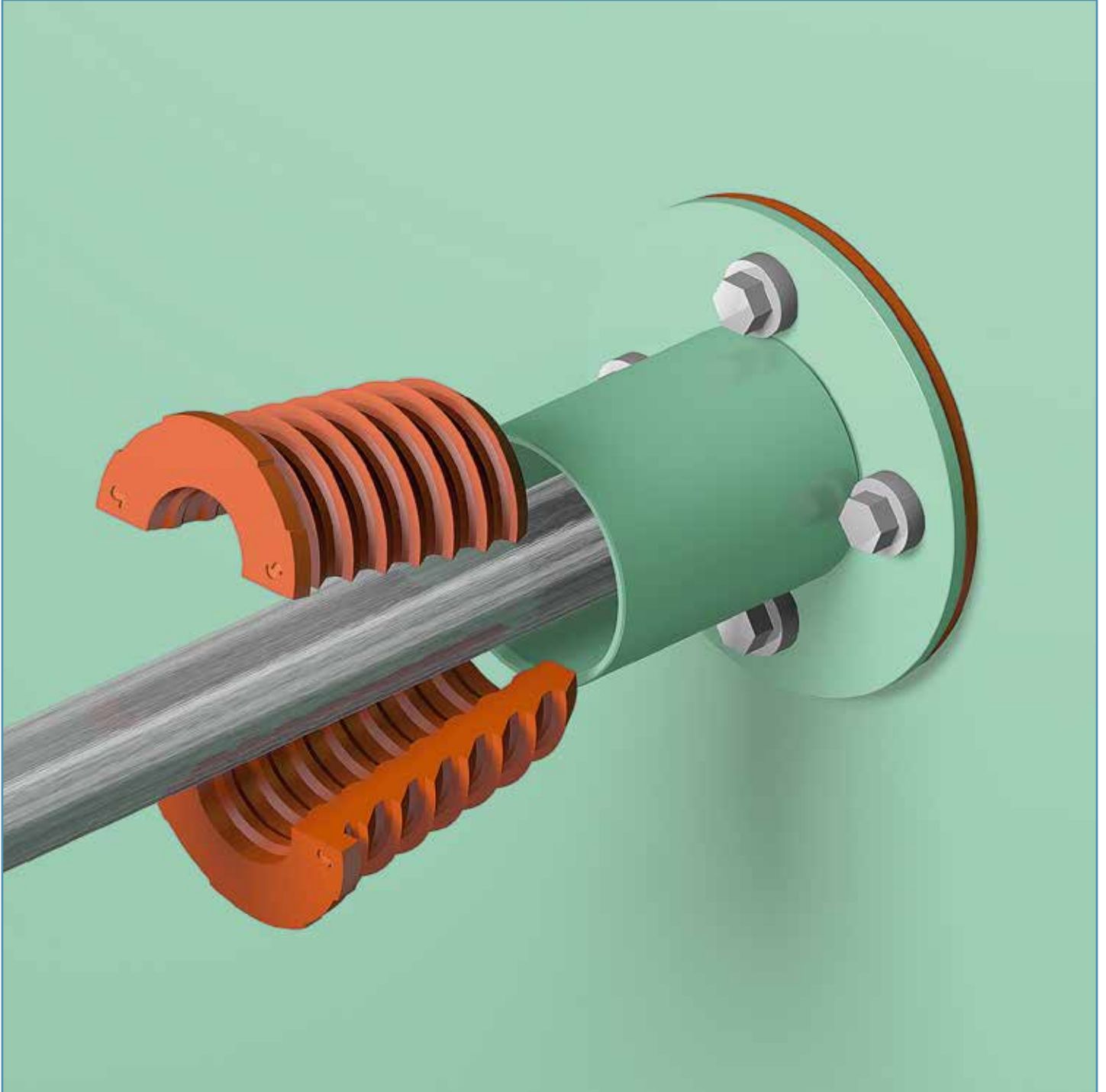
Both long bolts are tightened equally.

DE-INSTALLATION INSTRUCTIONS OF SLIPSIL® XL-120 AND STANDARD SLIPSIL® SEALING PLUGS



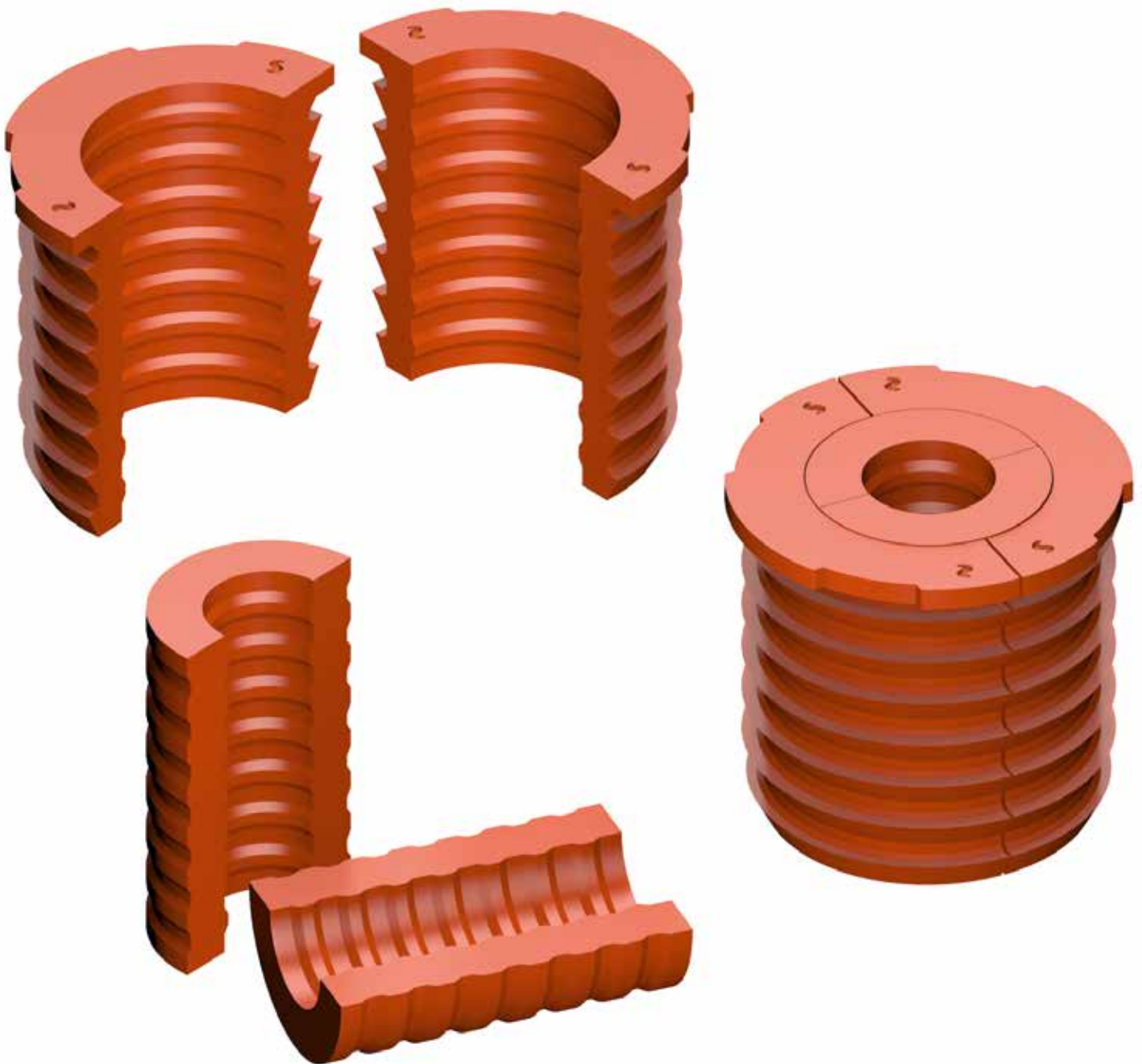
The SLIPSIL® sealing plug is pulled out of the conduit sleeve.

DE-INSTALLATION INSTRUCTIONS OF SLIPSIL® XL-120 AND STANDARD SLIPSIL® SEALING PLUGS



The SLIPSIL® sealing plug can be removed.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS AND ADAPTER IN SLIPSIL® XL-120 CONDUIT SLEEVES



INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS AND ADAPTER IN SLIPSIL® XL-120 CONDUIT SLEEVES

cable/ pipe diameter	plug type	article number	cable/ pipe diameter	plug type	article number	cable/ pipe diameter	plug type	article number
blind	40/0 AD XL	41.0900	35-36	60/35 AD XL	41.1635	60-61	100/60 AD XL	41.2860
5-6	40/5 AD XL	41.0905	36-37	60/36 AD XL	41.1636	61-62	100/61 AD XL	41.2861
6-7	40/6 AD XL	41.0906	37-38	60/37 AD XL	41.1637	62-63	100/62 AD XL	41.2862
7-8	40/7 AD XL	41.0907	38-39	60/38 AD XL	41.1638	63-64	100/63 AD XL	41.2863
8-9	40/8 AD XL	41.0908	39-40	60/39 AD XL	41.1639	64-65	100/64 AD XL	41.2864
9-10	40/9 AD XL	41.0909	40	60/40 AD XL	41.1640	65-66	100/65 AD XL	41.2865
10-11	40/10 AD XL	41.0910				66-67	100/66 AD XL	41.2866
11-12	40/11 AD XL	41.0911	blind	80/0 AD XL	41.2300	67-68	100/67 AD XL	41.2867
12-13	40/12 AD XL	41.0912	28-29	80/28 AD XL	41.2328	68-69	100/68 AD XL	41.2868
13-14	40/13 AD XL	41.0913	29-30	80/29 AD XL	41.2329	69-70	100/69 AD XL	41.2869
14-15	40/14 AD XL	41.0914	30-31	80/30 AD XL	41.2330	70-71	100/70 AD XL	41.2870
15-16	40/15 AD XL	41.0915	31-32	80/31 AD XL	41.2331	71-72	100/71 AD XL	41.2871
16-17	40/16 AD XL	41.0916	32-33	80/32 AD XL	41.2332	72-73	100/72 AD XL	41.2872
17-18	40/17 AD XL	41.0917	33-34	80/33 AD XL	41.2333	73-74	100/73 AD XL	41.2873
18-19	40/18 AD XL	41.0918	34-35	80/34 AD XL	41.2334	74-75	100/74 AD XL	41.2874
19-20	40/19 AD XL	41.0919	35-36	80/35 AD XL	41.2335	75	100/75 AD XL	41.2875
20-21	40/20 AD XL	41.0920	36-37	80/36 AD XL	41.2336			
21-22	40/21 AD XL	41.0921	37-38	80/37 AD XL	41.2337			
22	40/22 AD XL	41.0922	38-39	80/38 AD XL	41.2338			
			39-40	80/39 AD XL	41.2339			
blind	50/0 AD XL	41.1200	40-41	80/40 AD XL	41.2340			
10-11	50/10 AD XL	41.1210	41-42	80/41 AD XL	41.2341			
11-12	50/11 AD XL	41.1211	42-43	80/42 AD XL	41.2342			
12-13	50/12 AD XL	41.1212	43-44	80/43 AD XL	41.2343			
13-14	50/13 AD XL	41.1213	44-45	80/44 AD XL	41.2344			
14-15	50/14 AD XL	41.1214	45-46	80/45 AD XL	41.2345			
15-16	50/15 AD XL	41.1215	46-47	80/46 AD XL	41.2346			
16-17	50/16 AD XL	41.1216	47-48	80/47 AD XL	41.2347			
17-18	50/17 AD XL	41.1217	48-49	80/48 AD XL	41.2348			
18-19	50/18 AD XL	41.1218	49-50	80/49 AD XL	41.2349			
19-20	50/19 AD XL	41.1219	50-51	80/50 AD XL	41.2350			
20-21	50/20 AD XL	41.1220	51-52	80/51 AD XL	41.2351			
21-22	50/21 AD XL	41.1221	52-53	80/52 AD XL	41.2352			
22-23	50/22 AD XL	41.1222	53-54	80/53 AD XL	41.2353			
23-24	50/23 AD XL	41.1223	54-55	80/54 AD XL	41.2354			
24-25	50/24 AD XL	41.1224	55-56	80/55 AD XL	41.2355			
25-26	50/25 AD XL	41.1225	56-57	80/56 AD XL	41.2356			
26-27	50/26 AD XL	41.1226	57-58	80/57 AD XL	41.2357			
27-28	50/27 AD XL	41.1227	58-59	80/58 AD XL	41.2358			
28-29	50/28 AD XL	41.1229	59-60	80/59 AD XL	41.2359			
30-31	50/30 AD XL	41.1230	60	80/60 AD XL	41.2360			
31-32	50/31 AD XL	41.1231						
32	50/32 AD XL	41.1232	blind	100/0 AD XL	41.2800			
			40-41	100/40 AD XL	41.2840			
blind	60/0 AD XL	41.1600	41-42	100/41 AD XL	41.2841			
18-19	60/18 AD XL	41.1618	42-43	100/42 AD XL	41.2842			
19-20	60/19 AD XL	41.1619	43-44	100/43 AD XL	41.2843			
20-21	60/20 AD XL	41.1620	44-45	100/44 AD XL	41.2844			
21-22	60/21 AD XL	41.1621	45-46	100/45 AD XL	41.2845			
22-23	60/22 AD XL	41.1622	46-47	100/46 AD XL	41.2846			
23-24	60/23 AD XL	41.1623	47-48	100/47 AD XL	41.2847			
24-25	60/24 AD XL	41.1624	48-49	100/48 AD XL	41.2848			
25-26	60/25 AD XL	41.1625	49-50	100/49 AD XL	41.2849			
26-27	60/26 AD XL	41.1626	50-51	100/50 AD XL	41.2850			
27-28	60/27 AD XL	41.1627	51-52	100/51 AD XL	41.2851			
28-29	60/28 AD XL	41.1628	52-53	100/52 AD XL	41.2852			
29-30	60/29 AD XL	41.1629	53-54	100/53 AD XL	41.2853			
30-31	60/30 AD XL	41.1630	54-55	100/54 AD XL	41.2854			
31-32	60/31 AD XL	41.1631	55-56	100/55 AD XL	41.2855			
32-33	60/32 AD XL	41.1632	56-57	100/56 AD XL	41.2856			
33-34	60/33 AD XL	41.1633	57-58	100/57 AD XL	41.2857			
34-35	60/34 AD XL	41.1634	58-59	100/58 AD XL	41.2858			
			59-60	100/59 AD XL	41.2859			

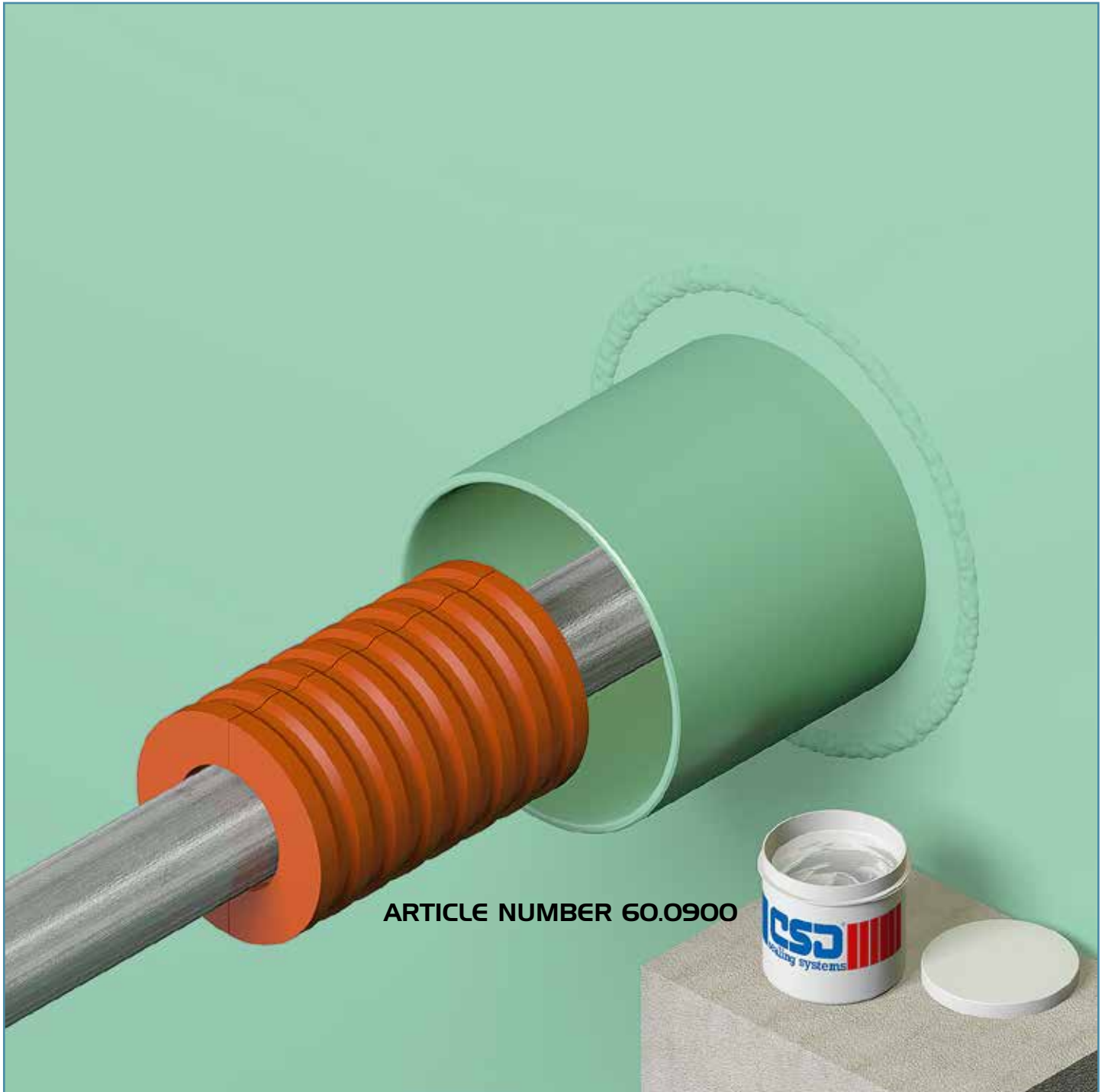


INSTALLATION INSTRUCTIONS SLIPSIL[®] XL-120 SEALING PLUGS AND ADAPTER IN SLIPSIL[®] XL-120 CONDUIT SLEEVES



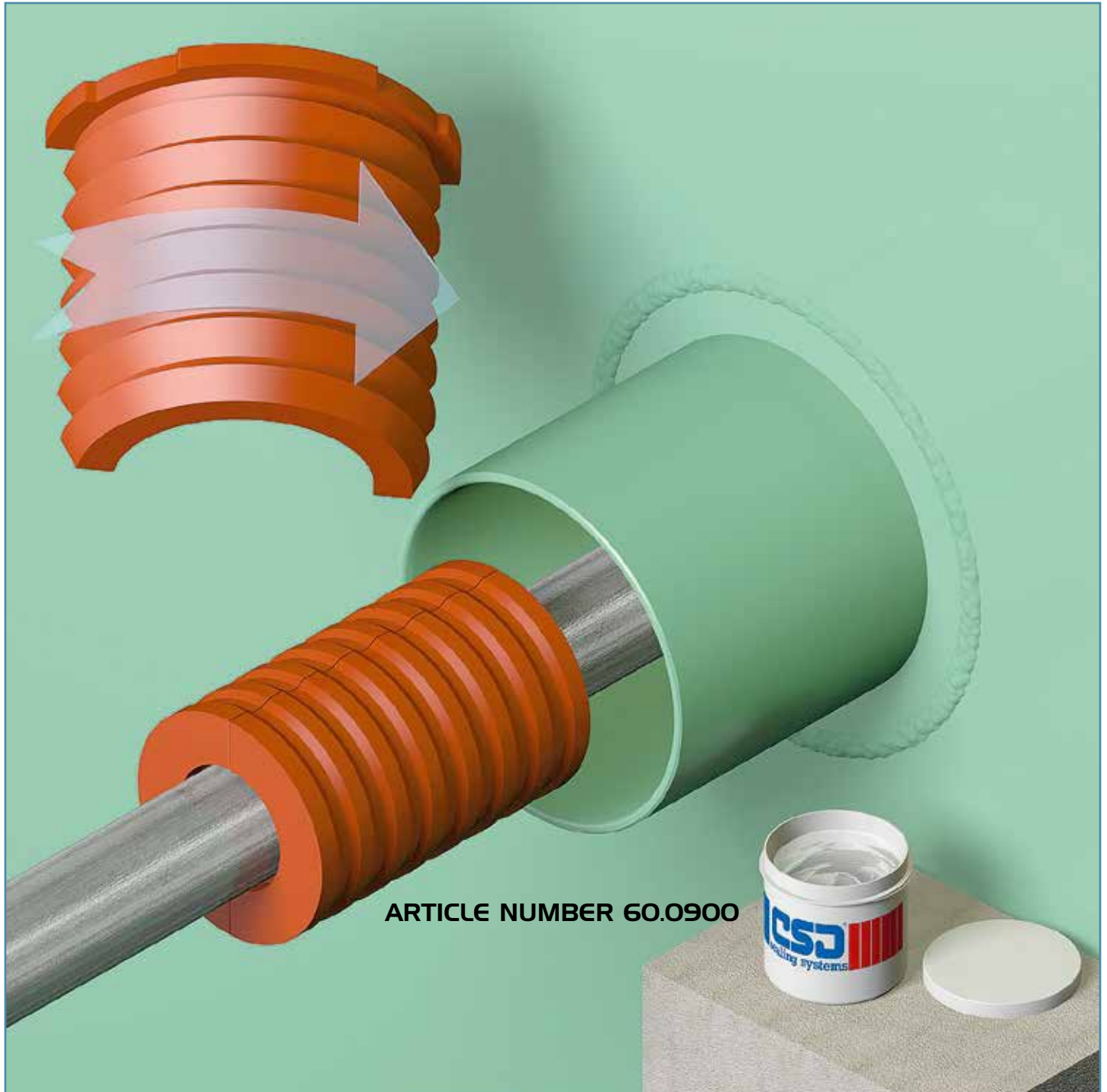
The SLIPSIL[®] XL-120 adapter consists of two segments. The profile on the outside of the SLIPSIL[®] XL-120 adapter is opposite the profile on the inside of the SLIPSIL[®] XL-120 sealing plugs. The SLIPSIL[®] XL-120 adapter has no flange. Only the inside surfaces of both segments of the SLIPSIL[®] XL-120 adapter are treated with CSD[®] lubricant. Also, the flat surfaces on the plug should be treated with the lubricant. Always use sufficient lubricant, which contributes to the ease of installation of the plugs. CSD[®] lubricant is an acid free, pharmaceutical petroleum jelly and will disappear after installation.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS AND ADAPTER IN SLIPSIL® XL-120 CONDUIT SLEEVES



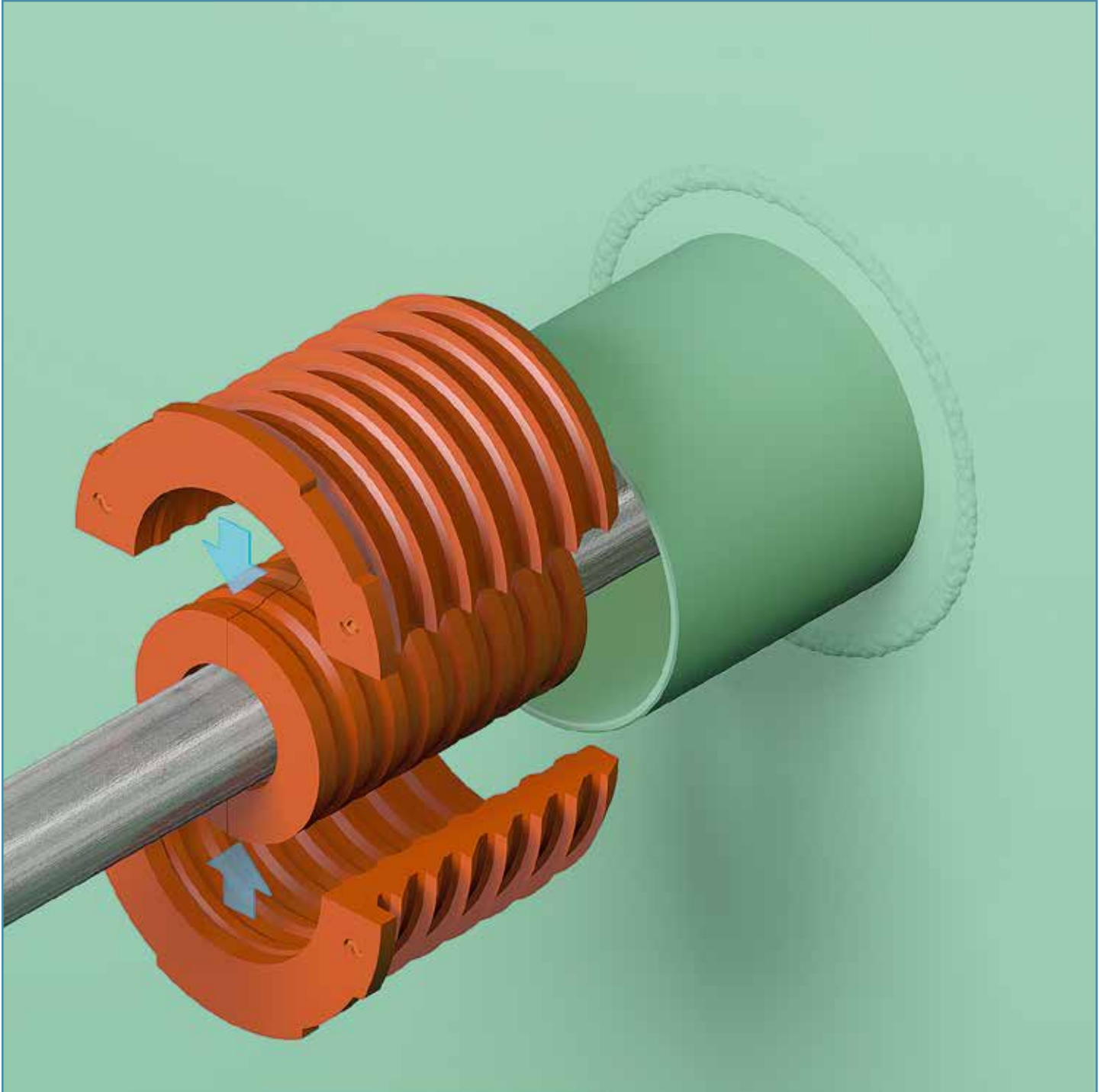
The two segments of the SLIPSIL® XL-120 adapter are placed around the ducted pipe or cable.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS AND ADAPTER IN SLIPSIL® XL-120 CONDUIT SLEEVES



Only the outside surfaces of both segments of the SLIPSIL® XL-120 sealing plug have to be treated with CSD® lubricant.

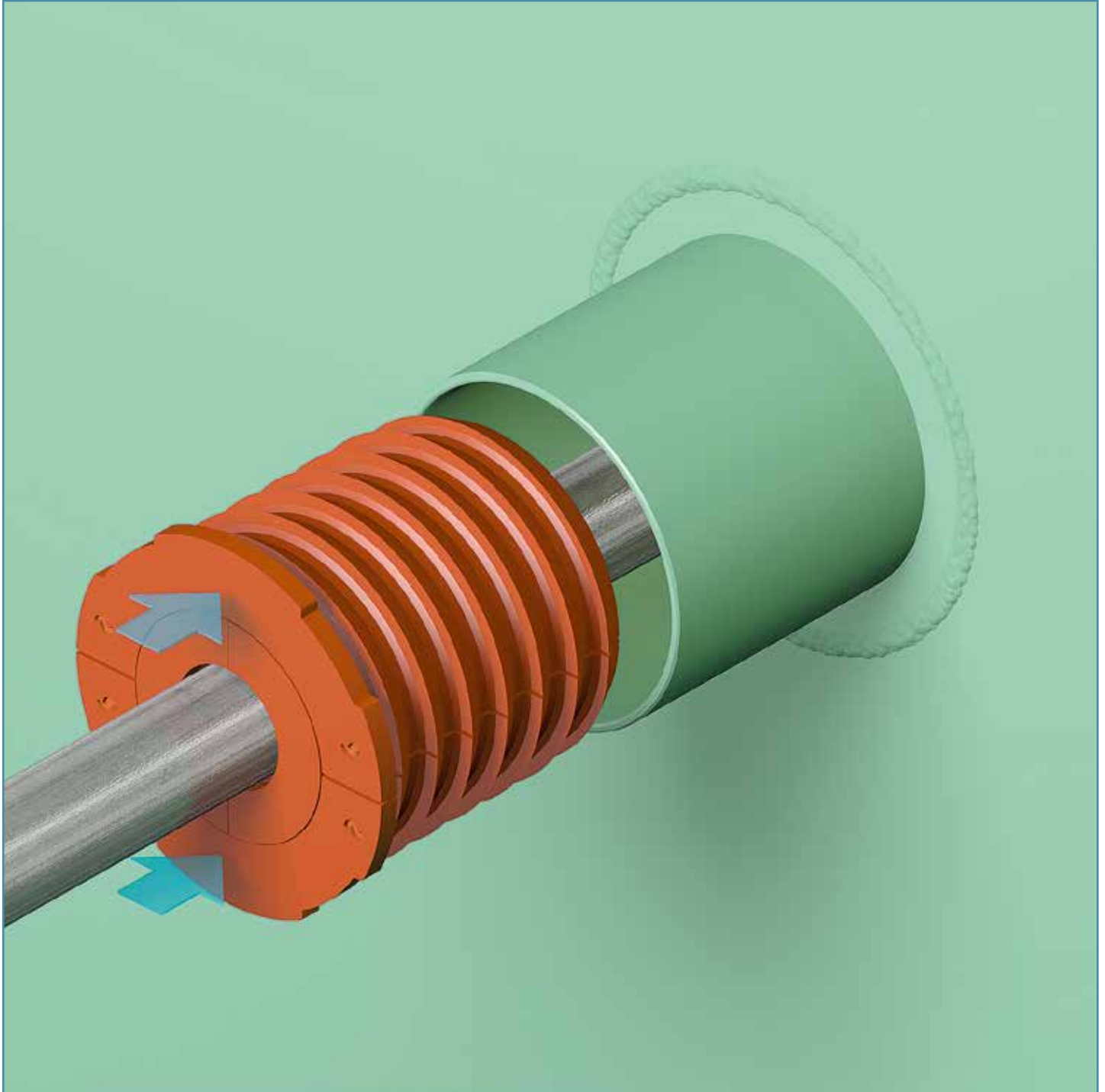
INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS AND ADAPTER IN SLIPSIL® XL-120 CONDUIT SLEEVES



After lubricating the outside of the segments of the SLIPSIL® XL-120 sealing plug, the set of SLIPSIL® XL-120 sealing plug and SLIPSIL® XL-120 adapter should be assembled in front of the penetration. The SLIPSIL® XL-120 plug is placed around the SLIPSIL® XL-120 adapter.

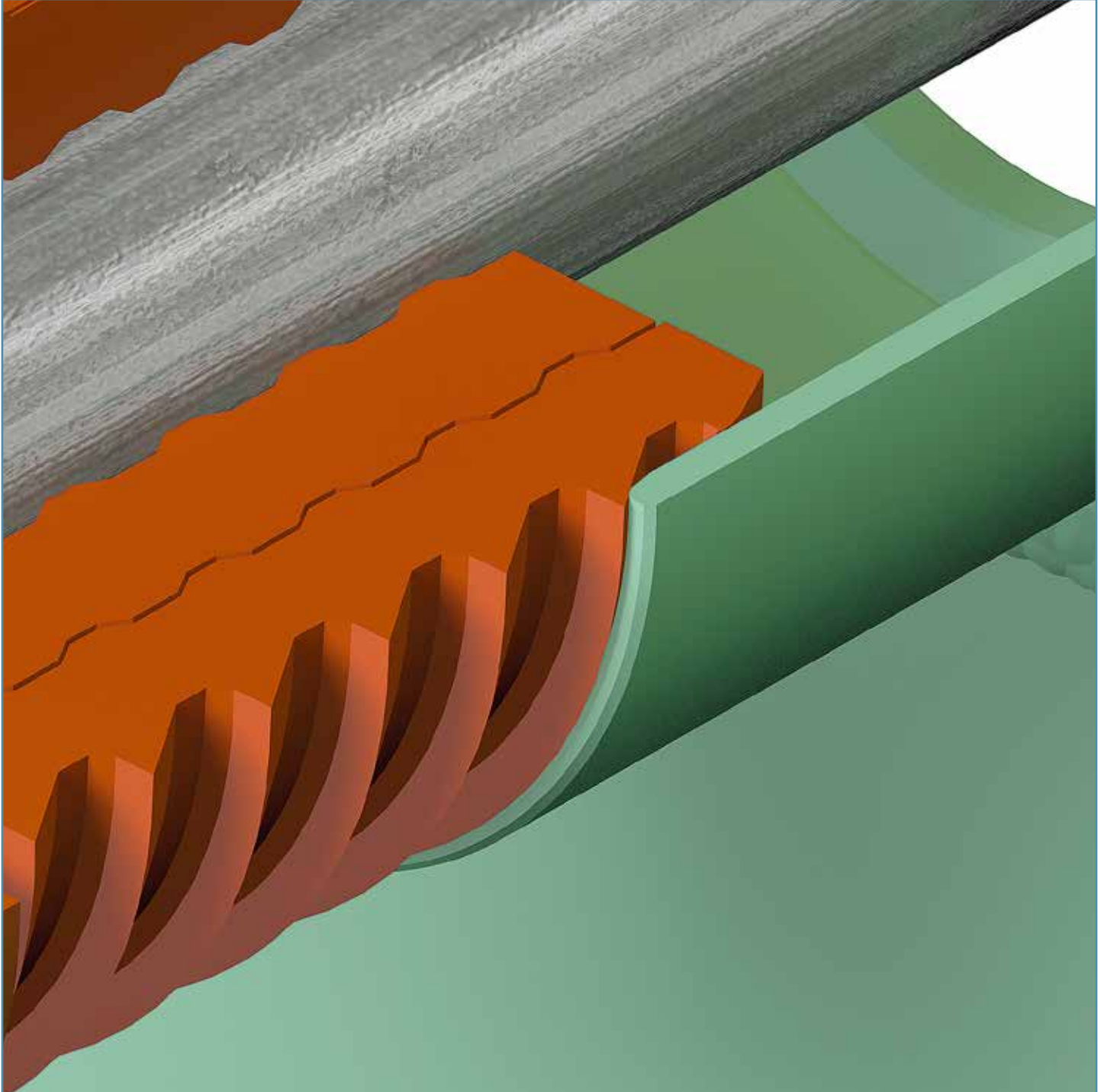
NOTE: the seam between the segments of the plug and the adapter should be placed 90° in relation to each other.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS AND ADAPTER IN SLIPSIL® XL-120 CONDUIT SLEEVES



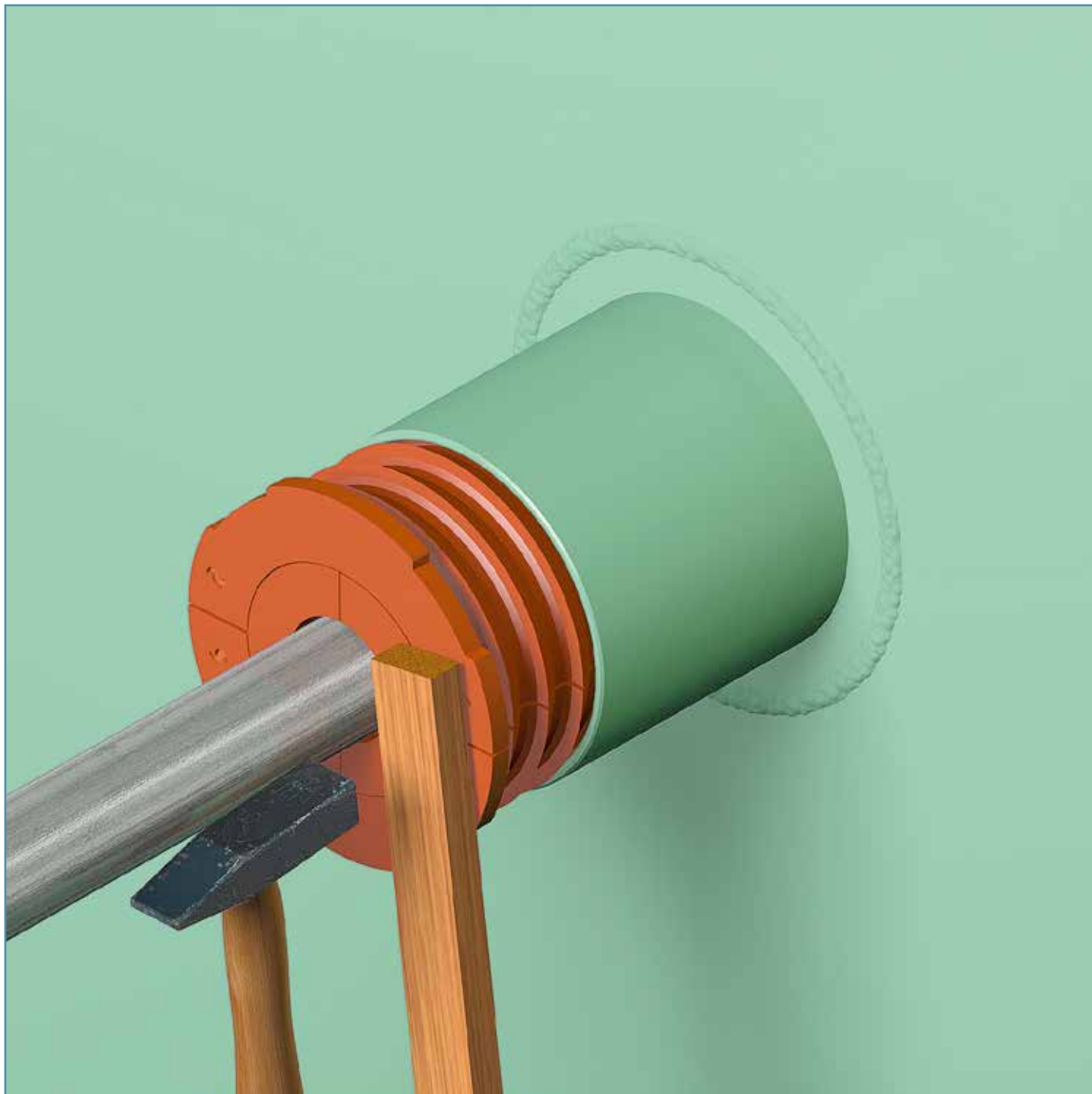
Both segments of the SLIPSIL® XL-120 sealing plug and adapter are pushed by hand, serration by serration, further into the conduit sleeve. Push the plug set in as far as possible in one try. When the insertion is stopped, the serrated profiles will settle themselves immediately against the wall of the conduit sleeve. The resistance for further insertion will then be increased substantially. The resistance will be, of course, higher with larger plug sizes.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS AND ADAPTER IN SLIPSIL® XL-120 CONDUIT SLEEVES



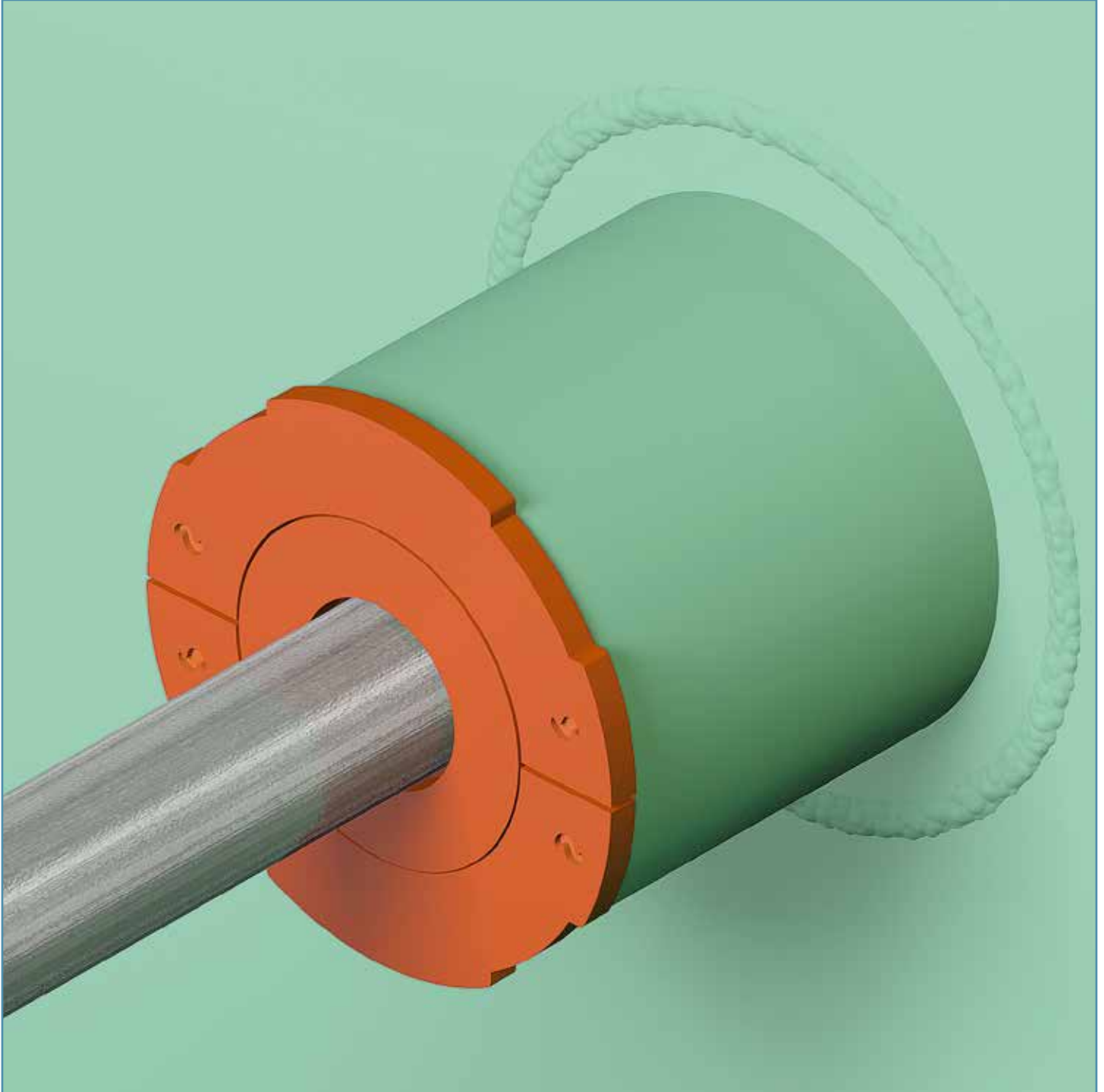
The front of the conduit sleeve is bevelled to allow for a perfect sliding of the profiled plug during further insertion. In addition, the bevelling is designed for positioning the segments inside the conduit sleeve. The serration at the bottom of the plugs has a smaller diameter than the other serrations.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS AND ADAPTER IN SLIPSIL® XL-120 CONDUIT SLEEVES



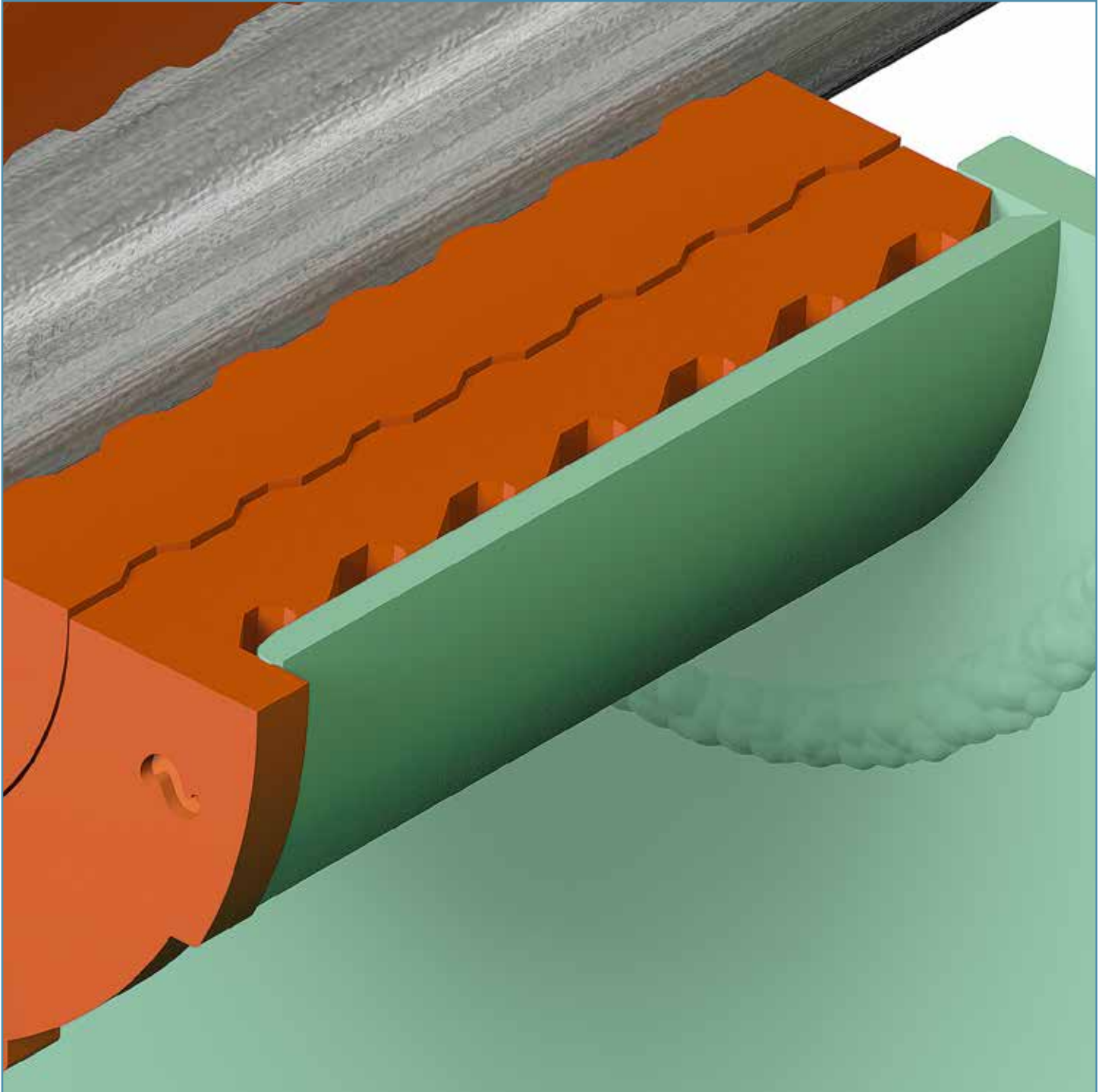
Due to the length of the SLIPSIL® XL-120 sealing system, the SLIPSIL® XL-120 plugs might not be able to be inserted completely by hand. In such a case, the set SLIPSIL® XL-120 sealing plug and adapter can be tapped in using a hammer and a piece of wood. Use a flat piece of wood to prevent the flange of the plug from damage.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS AND ADAPTER IN SLIPSIL® XL-120 CONDUIT SLEEVES



The flanged edge of the SLIPSIL® XL-120 sealing plug is fully abutting to the SLIPSIL® XL-120 conduit sleeve. This automatically guarantees that the SLIPSIL® XL-120 sealing plug is fully inserted and abutting against the shoulder inside the SLIPSIL® XL-120 conduit sleeve. The flange of the plugs is clearly marked with the SLIPSIL® logo.

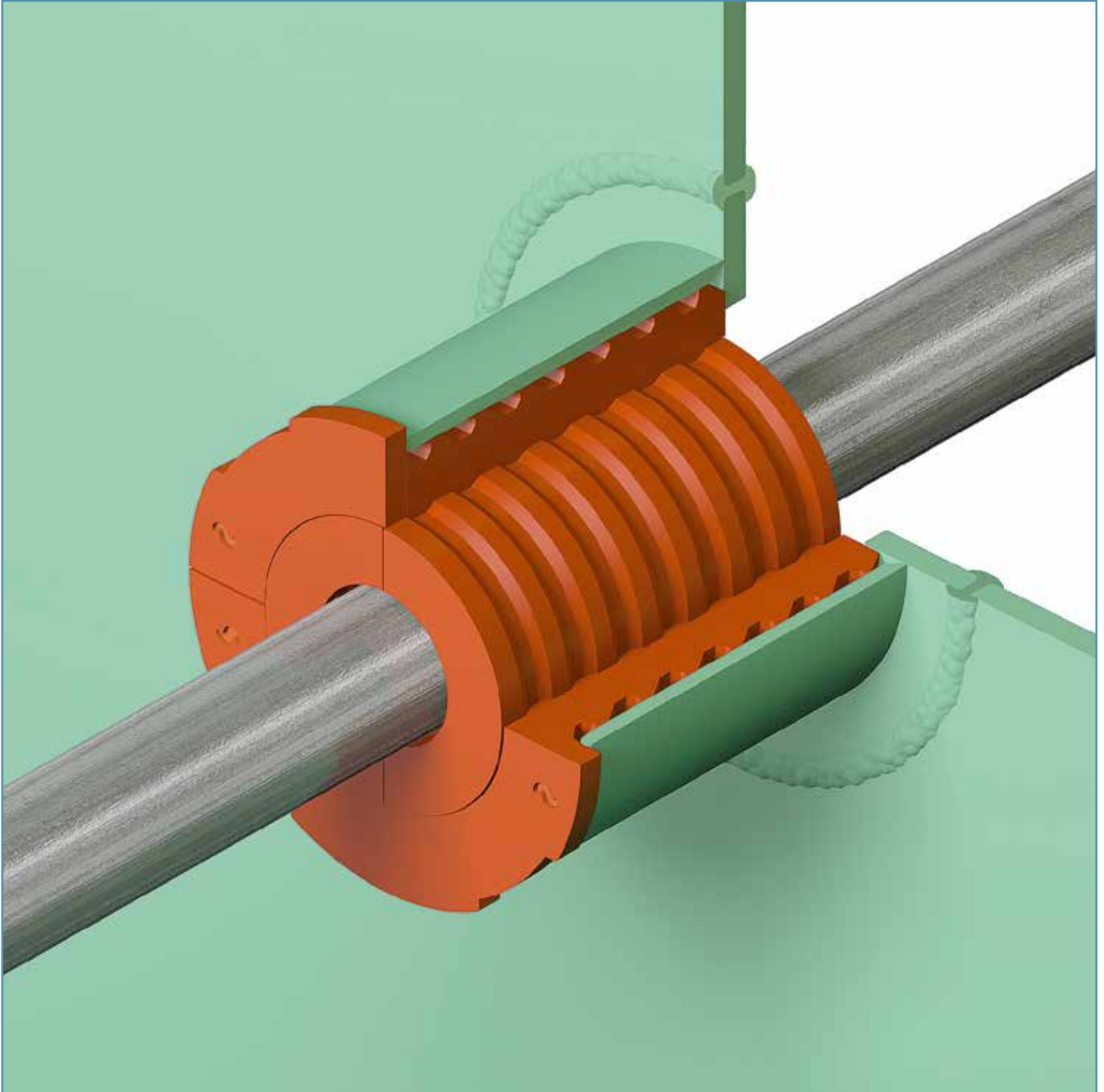
INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS AND ADAPTER IN SLIPSIL® XL-120 CONDUIT SLEEVES



The SLIPSIL® XL-120 sealing plug and adapter fully inserted in the SLIPSIL® XL-120 conduit sleeve with a shoulder inside. The shoulder makes further insertion impossible. The flange of the plug is abutting to the front side of the conduit sleeve.

The advantage of the SLIPSIL® XL-120 sealing system is the overall conduit depth of 113 mm. The engineered design of the plug profiling ensures that the rubber is hardly exposed to any compressive loads and will therefore maintain tightness ratings over a long service life.

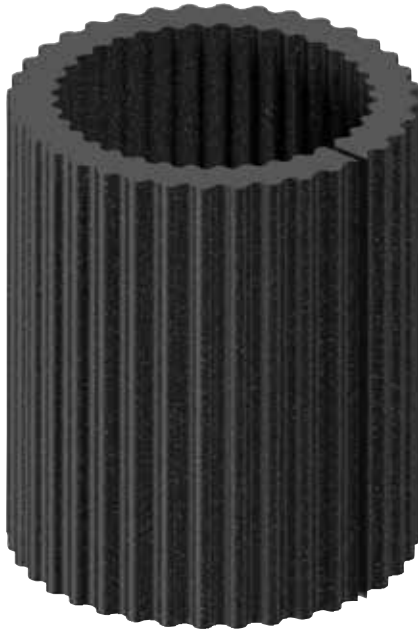
INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS AND ADAPTER IN SLIPSIL® XL-120 CONDUIT SLEEVES



For horizontal ducts of heavy pipes/cables, it is important to support the pipes properly on both sides of the conduit. The use of SLIPSIL® XL-120 sealing plugs allows ducting of a variety of metallic pipes. The plugs prevent galvanic corrosion, and absorb vibrations. The NOFIRNO® rubber, from which the SLIPSIL® XL-120 sealing plugs are made, allows for application in a wide temperature range from -60 up to +180 °C. The SLIPSIL® XL-120 sealing system offers excellent durability. NOFIRNO® rubber has very good UV, Ozone and weathering resistance. NOFIRNO® rubber has very endothermic properties and forms a protective ceramic shield under fire exposure.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS AND CRUSHER® IN SLIPSIL® XL-120 CONDUIT SLEEVES

CRUSHER® type C-FIT

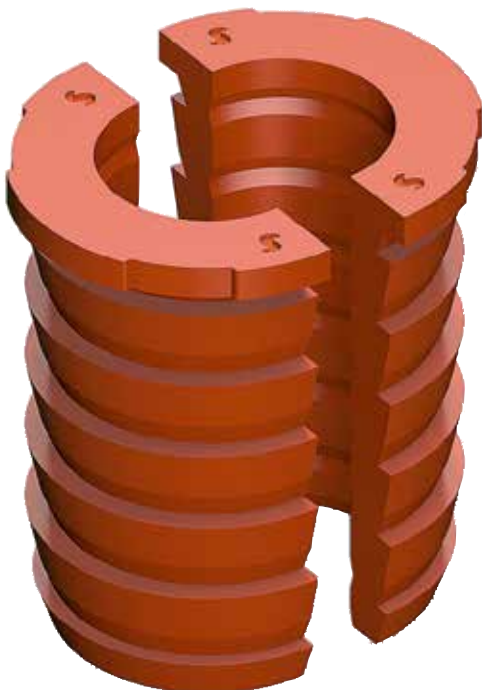


plastic pipe OD	crusher® type	conduit opening	crusher® length	article number
16	41/16	41	110	80.6140
18	41/18	41	110	80.6150
20	41/20	41	110	80.6160
25	41/25	41	110	80.6170
25	54/25	55	110	80.6250
32	54/32	55	110	80.6260
32	62/32	62	110	80.6300
40	62/40	62	110	80.6310
40	70/40	70	110	80.6320
50	70/50	70	110	80.6330
50	82/50	82	110	80.6380
63	100/63	100	110	80.6410
63	107/63	107	110	80.6470
75	100/75	100	110	80.6420
75	107/75	107	110	80.6480
90	131/90	131	110	80.6520
110	150/110	150	110	80.6530
125	150/125	150	110	80.6540
140	207/140	207	130	80.6628
160	207/160	207	130	80.6633

all dimensions in mm

series for application in the SLIPSIL® conduit sleeves

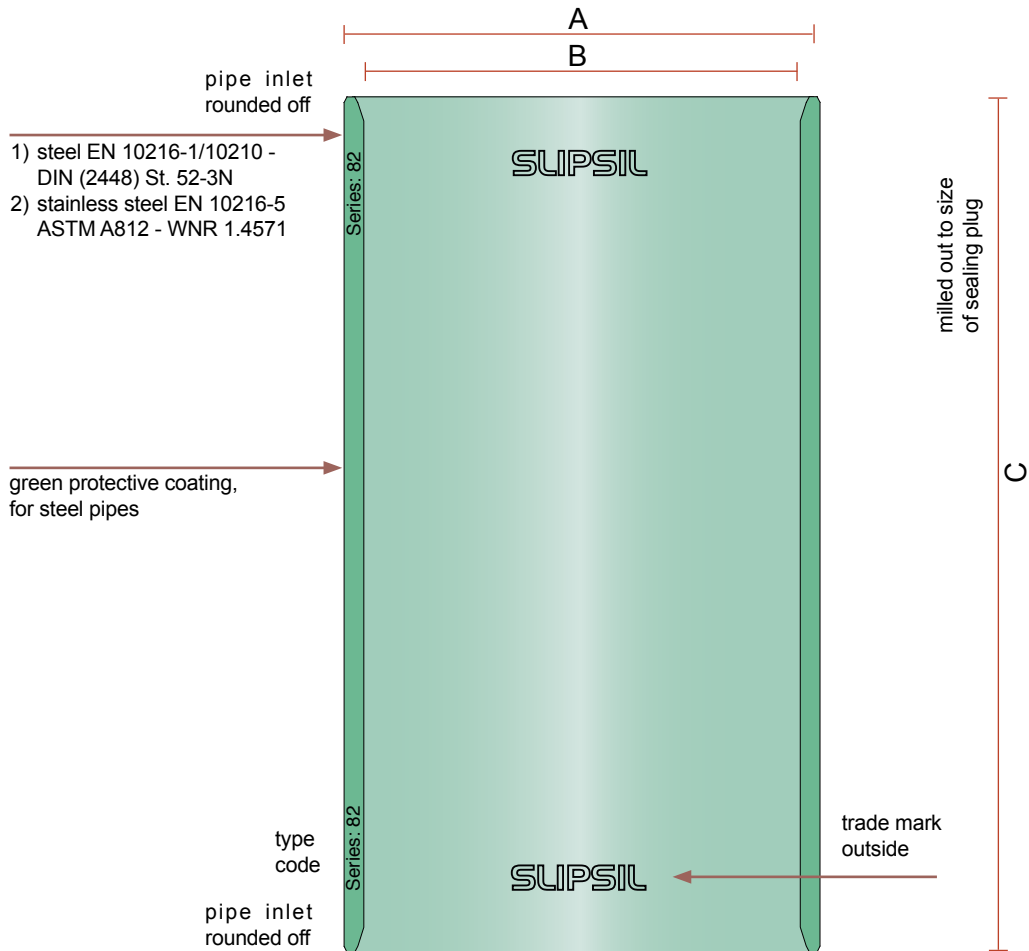
SLIPSIL® XL-120 sealing plug



plastic pipe OD	plug® type	conduit opening	plug length	article number
16	41/16-18	41	120	44.1014
18	41/18-20	41	120	44.1015
20	41/20-22	41	120	44.1016
25	41/25	41	120	44.1020
25	55/24-26	55	120	44.1416
32	55/32-33	55	120	44.1421
32	62/32-34	62	120	44.1720
40	62/40	62	120	44.1726
40	70/40-42	70	120	44.2024
50	70/50	70	120	44.2029
50	82/50-52	82	120	44.2429
63	100/62-64	100	120	44.2831
63	107/62-64	107	120	44.3231
75	100/75	100	120	44.2838
75	107/75-76	107	120	44.3238
90	131/90-92	131	120	44.3845
110	150/110-112	150	120	44.4031
125	150/125	150	120	44.4039
140	207/139	207	120	44.4833
160	207/159	207	120	44.4843

series for application in the SLIPSIL® conduit sleeves

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS AND CRUSHER® IN SLIPSIL® XL-120 CONDUIT SLEEVES



All dimensions in mm

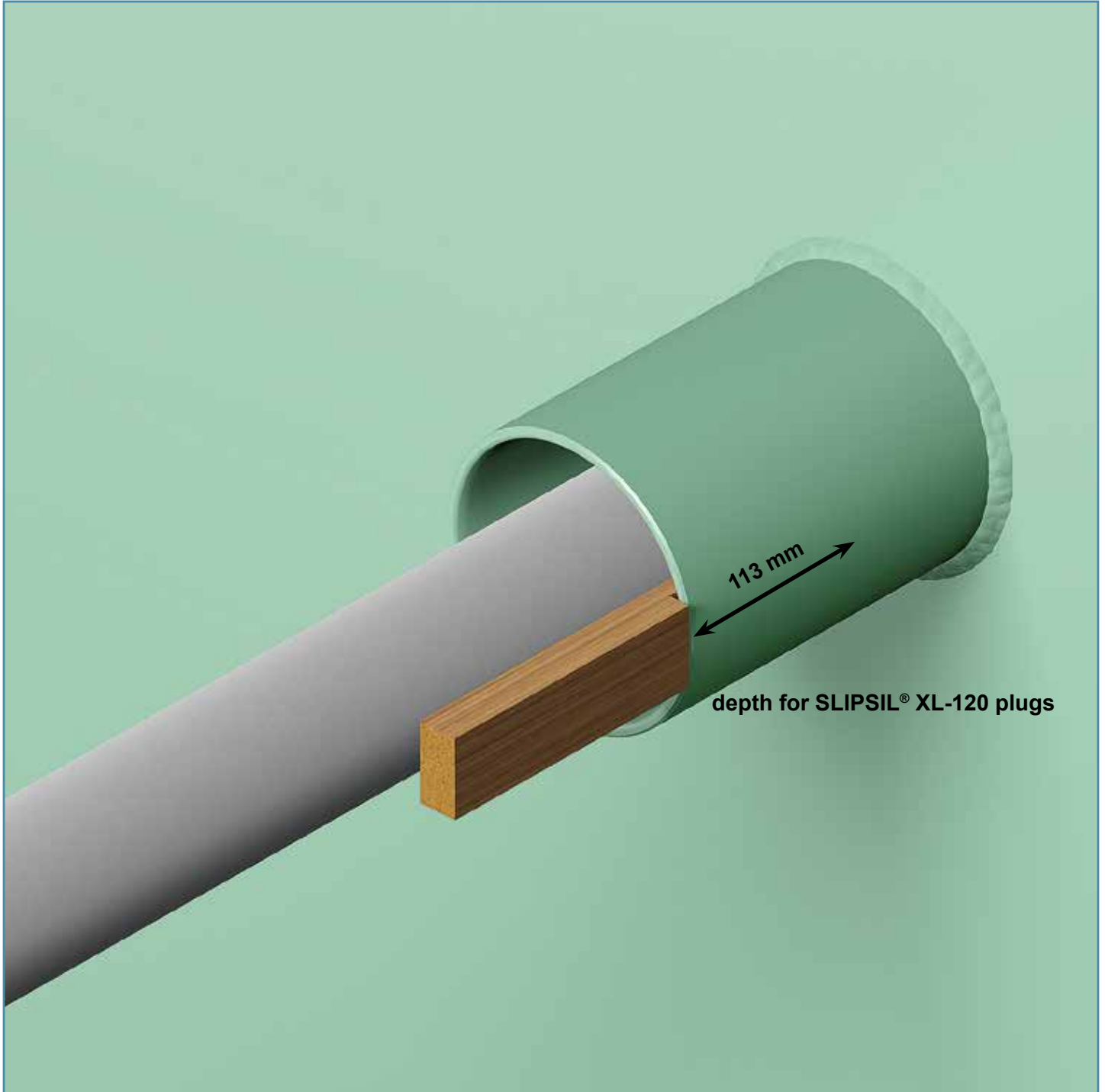
type	A	B	C	art. no. steel	art. no. stainless
SL 41 WS-cr	48.5	41	250	60.8161	60.8176
SL 55 WS-cr	62.5	55	250	60.8162	60.8177
SL 62 WS-cr	70	62	250	60.8163	60.8178
SL 70 WS-cr	78	70	250	60.8164	60.8179
SL 82 WS-cr	90	82	250	60.8165	60.8180
SL 100 WS-cr	108	100	250	60.8166	60.8181
SL 107 WS-cr	115	107	250	60.8167	60.8182
SL 131 WS-cr	140	131	250	60.8168	60.8183
SL 150 WS-cr	159	150	250	60.8169	60.8184
SL 207 WS-cr	220	207	250	60.8170	60.8186

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS AND CRUSHER® IN SLIPSIL® XL-120 CONDUIT SLEEVES



Before starting the installation procedure, any dirt, oil residues or corrosion should be removed from the conduit sleeve and the surface of the ducted pipe. The outside of the C-FIT CRUSHER® and the inner wall of the conduit should be treated with CSD® lubricant for ease of installation. The fitting C-FIT CRUSHER®, which is split lengthwise, is folded around the ducted plastic pipe. Please refer to the Safety Data Sheet of the CSD® lubricant for more information.

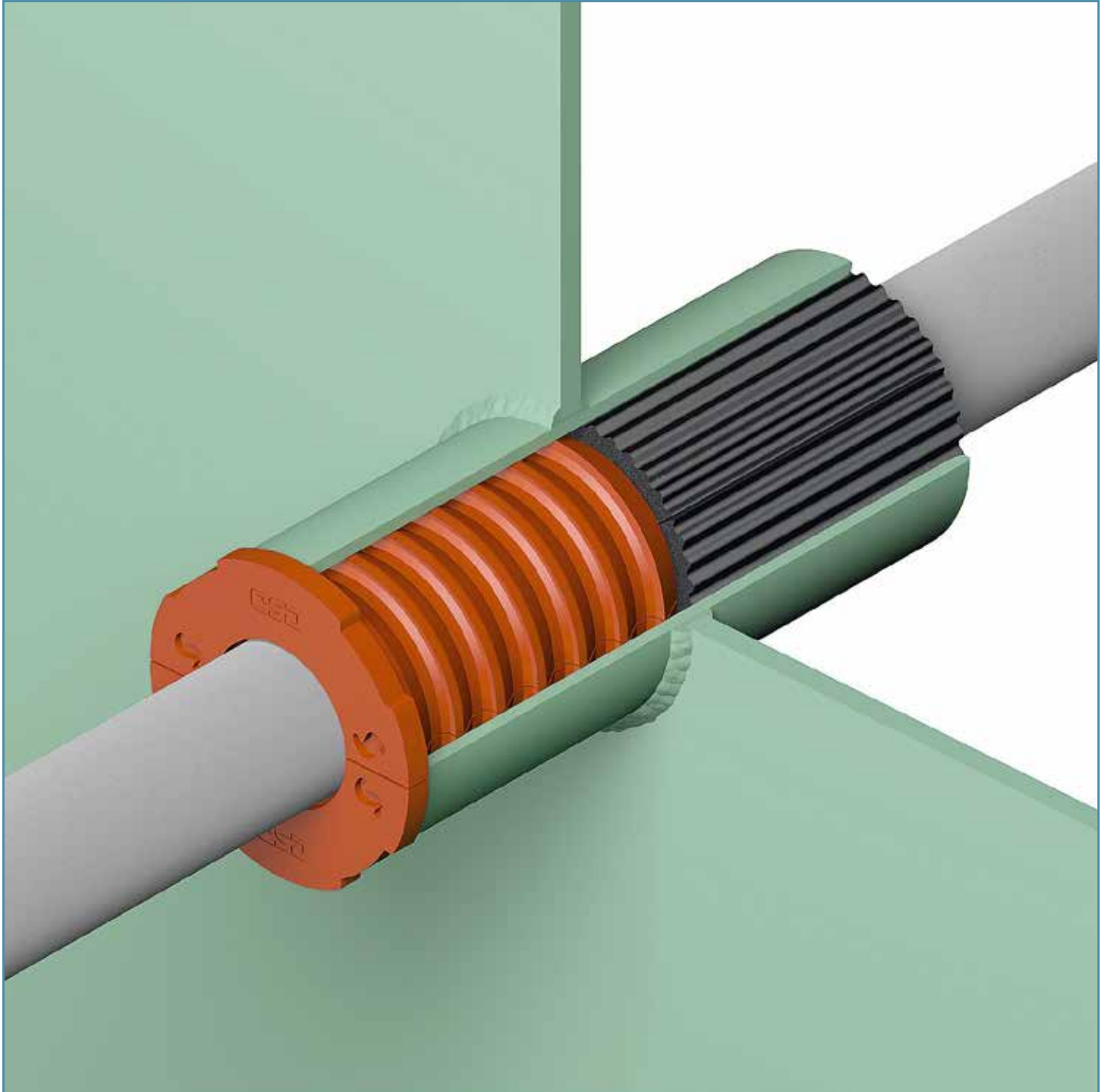
INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS AND CRUSHER® IN SLIPSIL® XL-120 CONDUIT SLEEVES



The C-FIT CRUSHER® should be inserted into the conduit sleeve over a length which corresponds with the length of the SLIPSIL® XL-120 sealing plug. With the Beele® adjuster or a marked piece of wood, the depth of the insertion of the C-FIT CRUSHER® should be checked.

Note: it will be impossible to correct the depth with the insertion of the SLIPSIL® XL-120 sealing plug.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS AND CRUSHER® IN SLIPSIL® XL-120 CONDUIT SLEEVES



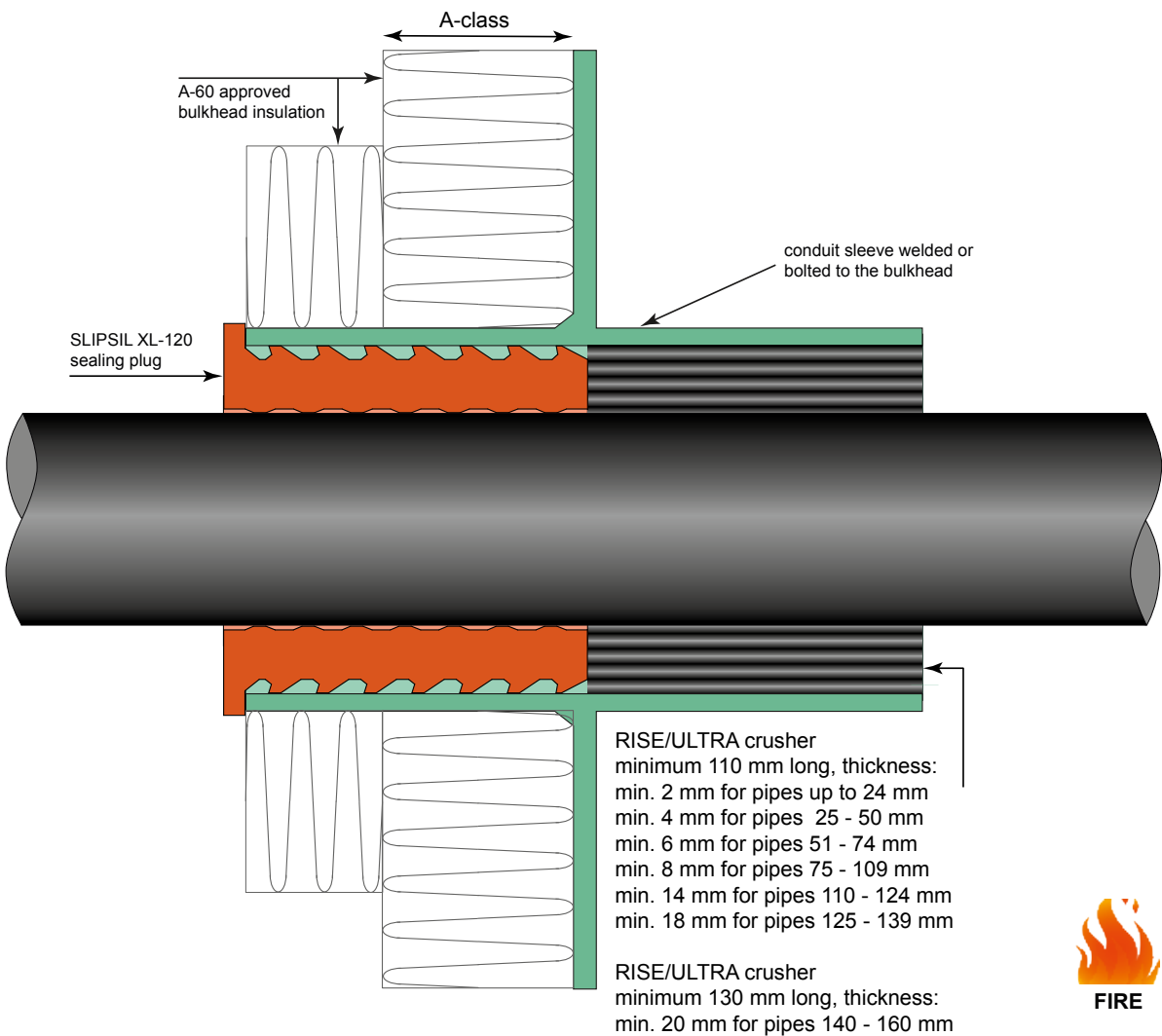
The flanged edge of the sealing plugs must be flush against the front side of the conduit sleeve.

For A-class penetrations, the conduit sleeve needs to be insulated only at the insulated side of the bulkhead or at the lower side of the deck.

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS AND CRUSHER® IN SLIPSIL® XL-120 CONDUIT SLEEVES

direction of exposure:
fire from CRUSHER side

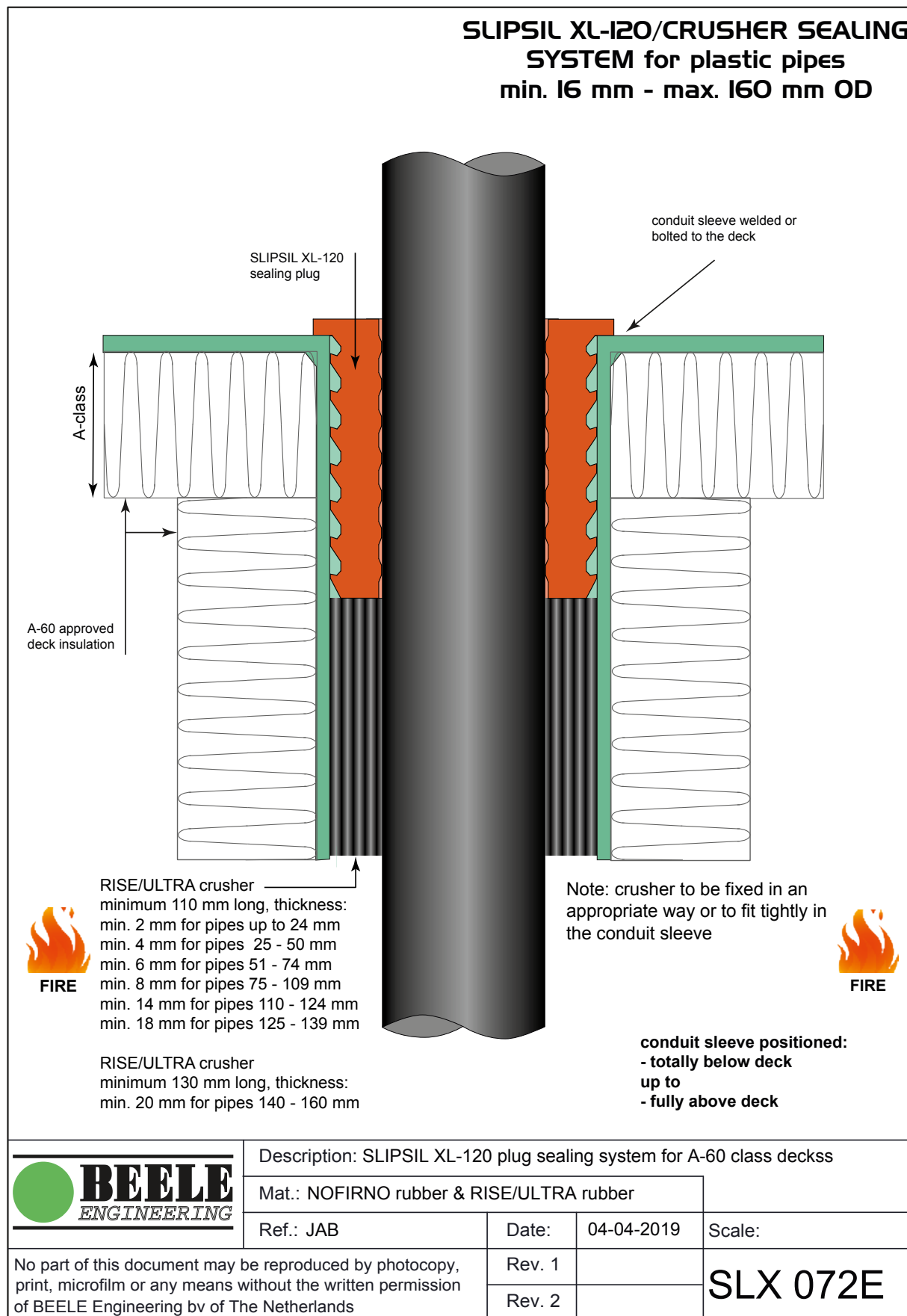
**SLIPSIL XL-120/CRUSHER SEALING
SYSTEM for plastic pipes**
min. 16 mm - max. 160 mm OD



Note: crusher to be fixed in an appropriate way or to fit tightly in the conduit sleeve

conduit sleeve positioned:
- **symmetrically**
or
- **non-symmetrically with longest length on unexposed side**

INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS AND CRUSHER® IN SLIPSIL® XL-120 CONDUIT SLEEVES



INSTALLATION INSTRUCTIONS SLIPSIL® XL-120 SEALING PLUGS - MED CERTIFICATE



CERTIFICATE

Certificate of
EC Type-examination (Module B)
182130001/AA/00
Product Category: MED/3.26b
USCG Approval No: 164.138/EC0575



Issued	16 April 2019	Date of expiration of validity	11 April 2024
Page	1 of 34 Certificate has four Annexes	Last date of placement	11 April 2024

With respect to Marine Equipment Directive 2014/90/EU and the implementing Regulation (EU) 2018/773, Kiwa Telefication Notified Body 0560 declares that the equipment:

Product description:	Penetrations through "A" Class divisions: pipe, duct, trunk, etc
Trademark:	SLIPSIL
Family name:	SLIPSIL XL-120 sealing plugs
Type designation:	XL-120

Manufacturer:	BEELE ENGINEERING
Address:	Beunkdijk 11
City:	7122 NZ AALTEN
Country:	Netherlands

Complies with the international instruments and test standards as listed in the Annex.
This certificate is granted to:

Name:	BEELE ENGINEERING
Address:	Beunkdijk 11
City:	7122 NZ AALTEN
Country:	Netherlands



Jaap Havinga
Assessor



Kiwa Telefication
Edisonstraat 12A
6902 PK ZEVENAAR
The Netherlands
Tel: +31 316 583 180
Fax: +31 316 583 189
www.telefication.com

Chamber of commerce
5156536

STATE-OF-THE ART METALLIC & PLASTIC PIPE SEALING SYSTEMS

NOFIRNO

slipsil
slipsil
XL-120

DYNATITE

CRUSHER

NOFIRNO®

- Approved for harshest fire ratings for pipe transits (A, H and Jet Fire class).
- Allows axial and radial movement of the ducted pipe. High pressure ratings - designed for gas and/or watertight penetrations.
- Prevents corrosion inside the penetration.
- NOFIRNO® rubber sleeves and sealant will remain stable and not be consumed by fire.
- **Breakthrough - MULTI-ALL-MIX® SYSTEM**
- Approved for any combination of cable and/or metallic, GRP or plastic pipes!

SLIPSIL®

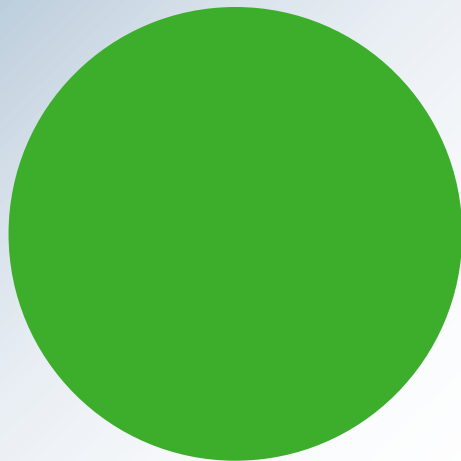
- Designed to provide fire safe, gas and watertight seals for pipe penetrations.
- For transits carrying single or multiple metal pipes with the same diameter (hydraulic and pneumatic lines).
- Installs in a couple of minutes. Lubricate and push - that is it!
- No bolting or other mechanical devices.
- Absorbs mechanical stresses, vibration and prevents galvanic corrosion problems.
- Wide temperature range: -50 °C up to +180 °C.
- **Proven - simple, shortest conduit length**
- The system of choice in shipyards worldwide for more than 30 years!

DYNATITE®

- For applications where a high degree of (instantaneous) tightness is required.
- Dynamic sealing when a disaster occurs.
- Plugs are compressible and will return to their original shape after shock pressure.
- Easily withstands shock pressure loads of up to 15 bar (220 psi).
- Ideal solution for the columns of offshore rigs and collision bulkheads.
- **Breakthrough - dynamic compression**
- Based on high-tech rubber grade and engineered profiling, the DYNATITE® plugs can be substantially compressed and get tighter with excessive pressure.

CRUSHER®

- Simple and effective system for all plastic pipe transits.
- RISE®/ULTRA C-FIT crushers squeeze and seal.
- RISE®/ULTRA wraps to be used for non-SLIPSIL® and oversized conduit sleeves.
- RISE®/ULTRA C-FIT crushers and wraps integrated in the NOFIRNO® sealing system.
- NOFIRNO® sealant adheres well to plastics: high degree of water tightness feasible.
- **Breakthrough - adhesion under fire load**
- RISE®/ULTRA compound forms an adhesive mass during fire exposure!
- Approved for a multiple mixture of all kinds of plastic pipes.



WE CARE

**BEELE ENGINEERING:
A COMPANY DEDICATED
TO SAFETY
FOR OVER 45 YEARS**



BEELE Engineering bv
Beunkdijk 11 - 7122 NZ AALTEN - THE NETHERLANDS
Tel. +31 543 461629 - Fax +31 543 461786 - E-mail: info@beele.com
Websites: <https://www.beele.com>, sealingvalley.com and fissiccoating.com