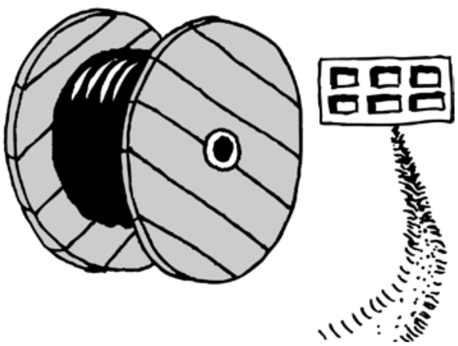
Installation instructions

Installing FLEXWELL®-HL Pipe

Unreeling the pipe

⚠ The piping shall only be installed by qualified personnel (certified by the manufacturer). The use of non-qualified personnel or any deviations from these recommended procedures could result in damage or leakage of the system.

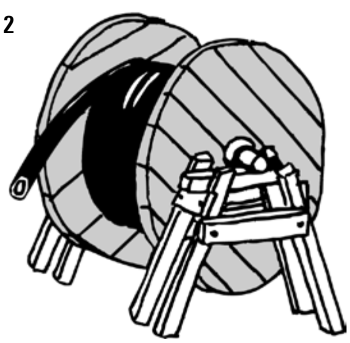
1



You will have received our FLEXWELL®-HL Pipe in a coil or on a cable reel. Ideally, you should position the drum in such a way that the pipe can be unreeled directly from the drum.

⚠ Secure reel from falling or rolling.
Storage temperature ≤ 120 deg F.

2



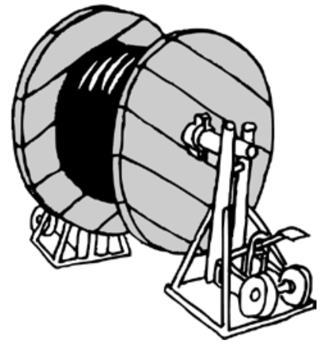
Use a reel stand to unreel the pipe.

Use a 3 inch steel pipe as axle (see figure 3).

⚠ The shrink cap at the end of the pipe should not be removed in order to prevent dirt or moisture from entering the primary or the secondary pipe when laying pipe.

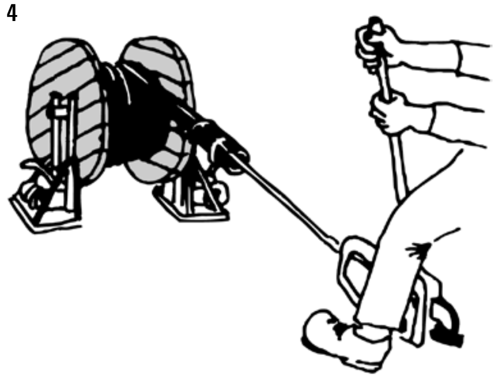
⚠ While handling the pipe, always make sure to use appropriate safety shoes and gloves.

3



Hydraulic jacks simplify the work. These are worth purchasing if you are frequently involved in laying FLEXWELL®-HL Pipes.

4



For large diameters or longer pipes, it may be necessary to use a simple hand-jack. If necessary, a deflection pulley can also be used. If you are using a motorized jack or tractor, ensure that the pulling speed does not exceed 1 ft/s.

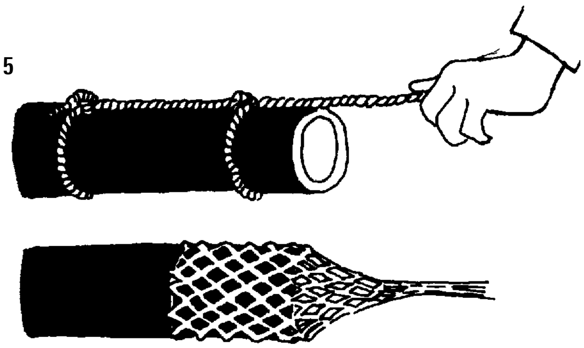
⚠ **Caution:** When untying the end of the pipe from the reel or ring. The pipe is under considerable natural tension.

⚠ When unreeling pipe maintain the reel under tension. If the reel is allowed to turn freely the pipe may jump from the reel in loops and buckle. Secure reel after removing a section of pipe.

Installation instructions

Installing FLEXWELL®-HL Pipe

5

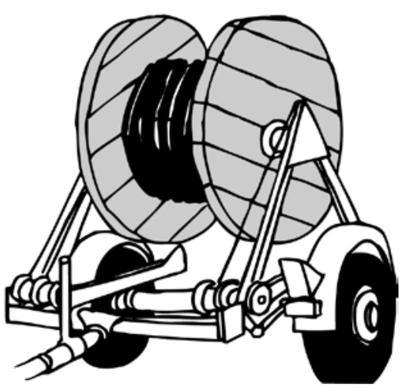


If you are working with a steel traction cable, use an end-piece made of hemp or nylon and tie an offset double knot. If there is a risk of the tied end to jam, use a cable stocking. These can be purchased from Brugg Pipesystems.

⚠ At all times during laying, the pipe ends must be protected in such a way that dirt and moisture are unable to penetrate. Beware of sharpe edges.

⚠ Pipe cutting operations can generate dust or cutting chips that irritate skin and eyes. Operators should wear heavy clothing, including long-sleeve shirts, that protect the skin. Eye protection is also required. Use working gloves to protect skin from sharpe edges (burrs).

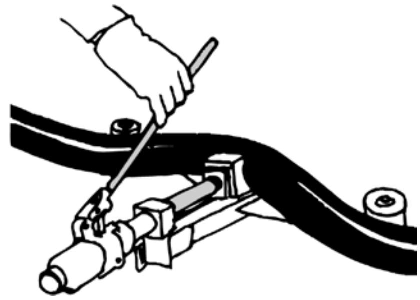
6



For large pipe diameters or longer sections of pipe, it is best to use a cable-laying trailer. We recommend to contact an electric cable laying company in your area.

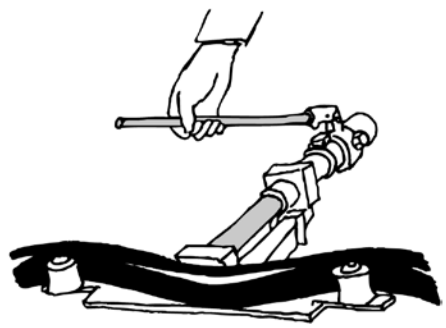
Bending the FLEXWELL®-HL Pipe

7



Pipes sizes up to 48/71 (1 ½") can be bent by hand. When laying FLEXWELL®-HL Pipes 60/83 (2") and bigger, it is advisable to use a bending machine, particularly if the pipes are to be laid in a building, channel or conduit.

8



⚠ If possible, narrow bending radii should be avoided. Radii which are too narrow make your work more difficult and, at worst, may damage the pipe. The following guidelines should be observed:

⚠ When pre-installing the end fittings do not use the end fitting as leverage for bending the pipe as this can result in secondary containment leaks. Whether with a pipe bender or by hand always use the pipe as leverage.

Table 1 Bending radius

Type	Pipe size	Minimum bending radius in the ground	Recommended bending radius when laying
FSR-HL 30/ 48	1"	20	40
FSR-HL 48/ 71	1 ½"	24	47
FSR-HL 60/ 83	2"	28	59
FSR-HL 98/134	3"	40	80

All dimensions in inch

Operating temperature

FLEXWELL®-HL Pipe is rated for – 13 °F to + 122 °F

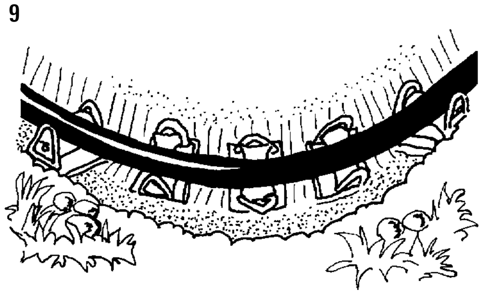
Installation instructions

Installing FLEXWELL®-HL Pipe

Installing the FLEXWELL®-HL Pipe underground

Install all pipe with a continuous slope of at least 1/8'' per foot toward the tank or the sump. Support pipe sufficiently to avoid low points.

9



Cable rollers reduce friction and protect the pipe if it has to be laid around sharp corners. It makes work easier, particularly on stretches with a large number of curves.

In general, cable rollers are used by cable laying companies, and can be rented from them.

Securing the FLEXWELL®-HL Pipe

The FLEXWELL®-HL Pipe can be installed and secured directly onto a flat surface of concrete, wood or other suitable material or by using Unistrut profiles. In either case it is recommended to use Unistrut "Cush-a-Clamp" clamps. See Table 3 for clamping distances.

Table 3 Clamping distance

Type	Pipe size	horizontal	vertical
FSR-HL 30/ 48	1"	47	55
FSR-HL 48/ 71	1 ½"	60	70
FSR-HL 60/ 83	2"	65	70
FSR-HL 98/134	3"	70	80

All dimensions in inch

When installing FLEXWELL®-HL Pipe in a trench, make sure that the pipe is at sufficient depth to protect it from surface traffic or other loads. At a minimum a layer of sand or pea gravel of 4 inch below the pipe and 6 inch above the pipe should be maintained.

Decking slabs may be laid on top of the sand or gravel layer over the pipe to protect it from penetration from above.

The installation of a warning strip above the pipe is advisable.

Above ground installation

When installed above ground FLEXWELL®-HL Pipe must be protected from any damage due to traffic, pedestrian traffic, construction activity or any other activity that could impact, scrape, puncture or crush the pipe.

This is particularly true in public areas, where also intentional damage is possible.

Installation instructions

Installing FLEXWELL®-HL Pipe

Marking

To identify abbreviations used for pipe markings, consult table 4.

Table 4

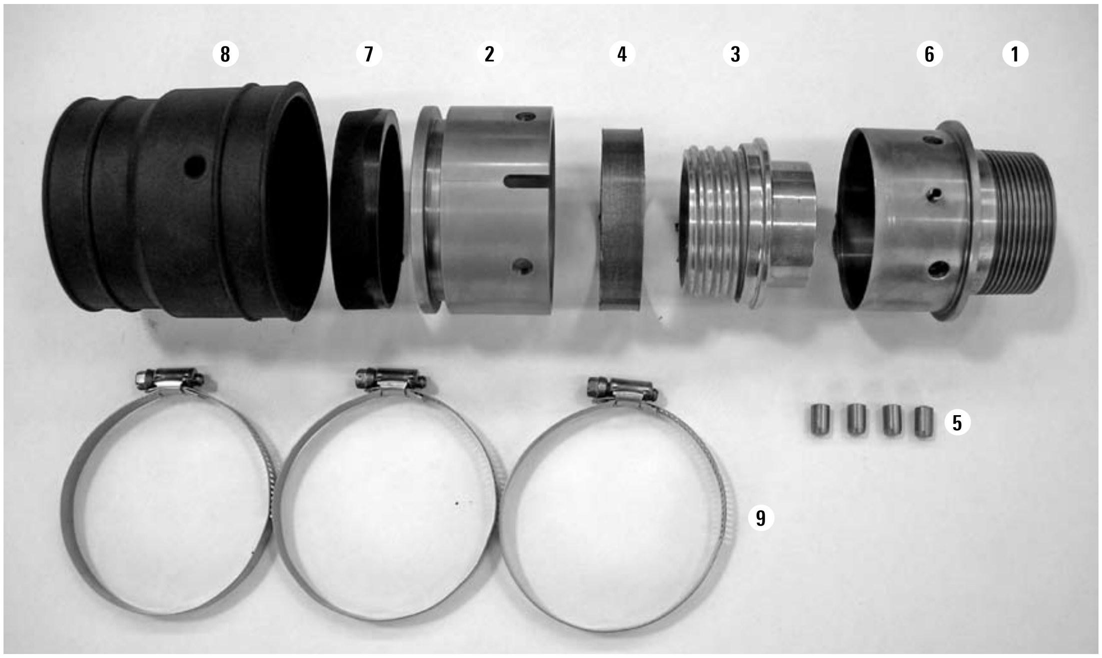
Description	Marking
Pipe classification with date code	**Pipe no.[1] (e.g. 12345)**
Manufacturer name	**BRUGG**
Trade name	**FLEXWELL®-HL Pipe**
Type	**FSR-HL**
Integral primary/secondary system	**PS**
Nominal dimension	**1", 1 ½", 2" or 3"**
Nominal pressure	**50 psig**
Installation	**Underground Use Only**
OEM	**Use Only OEM Fittings – Follow Installation Instructions**
Medium	
Motor vehicles fuels	**MV**
Concentrated fuels	**CT**
High blend fuels	**HB**
Aviation and marine fuels	**A&M-fuels**

[1] Manufacturing date and manufacturing information of the material and manufactured article as well as all testings are traceable via the pipe number.

Installation instructions

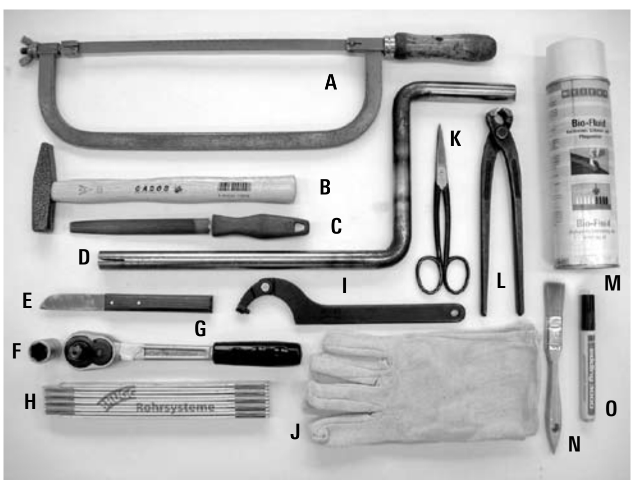
Open Secondary Containment Pipe System

1 End fitting – components



1 Threaded connector
2 Thrust collar
3 Core piece
4 Graphite seal
5 Grooved pins
6 Positioning pin
7 Support ring
8 Test boot
9 Clamp

2 Installation tools



A Hacksaw
B Tinsmith's hammer
C Smoothing file
D Secondary pipe stripping tool
E Safety knife
F Socket ½" (17 mm)
G Socket wrench
H Folding rule
I Spanner wrench
J Gloves
K Metal shears
L End cutting pliers
M Lubricant
N Brush
O Marker

3 Installation tools

Alternative:
Pipe cutter[1] for plastics

[1] Note the warning notices of the manufacturer.

4 Assembly flanges

Flanges to assemble couplings.

Installation instructions

Open Secondary Containment Pipe System

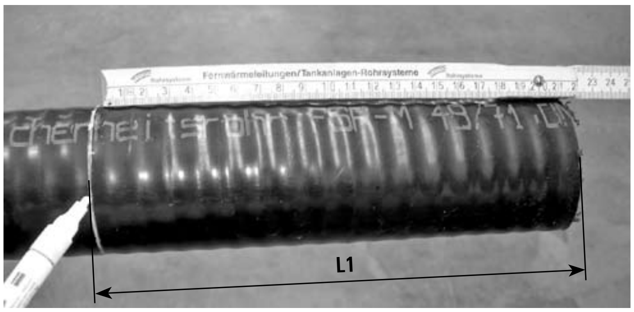
5 Remove PE jacket

Remove PE jacket according to table below

	L1 dimension with		
ND	**Welding**	**NPT Thread**	**EZ-Fit**
1 ½"	6.9	4.9	6.3
2"	7.0	5.1	5.9
3"	3.5	8.0	7.9

All dimensions in inch

⚠ Use protective gloves at all times.



6 Remove PE jacket

Take care not to damage the corrugated pipe while cutting the PE jacket. Set knife tangential to PE jacket and start cutting.

⚠ **Caution.** Risk of knife injury.

7 Remove PE jacket

Pull PE jacket away from pipe while perfoming radial cut.

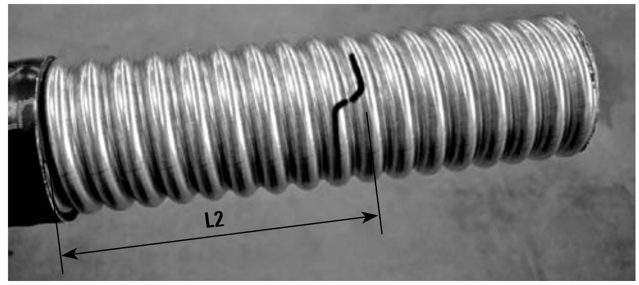
⚠ **Caution.** Do not squeeze fingers between pipe and PE jacket.

8 Remove secondary pipe

Remove secondary pipe according to table:

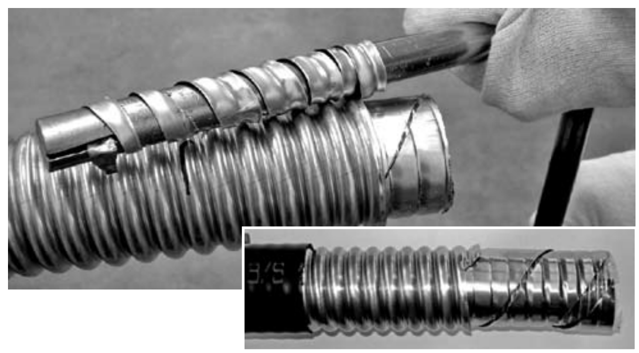
ND	**L2**
1 ½"	1.2
2"	1.0
3"	1.3

All dimensions in inch



9 Remove secondary pipe

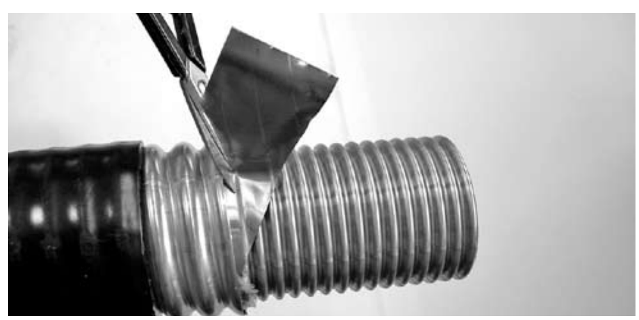
Cut in pipe at crest of a wave at the pipe end and bend up the metal strip. This strip should have an appr. length of 2 inch. Straighten metal strip inbetween two hammers. Apply secondary pipe stripping tool to metal strip and "peel" down at an angle of 30° to the pipe axis.



10 Armoring tape

Cut back the armoring tape to the end of the secondary pipe using shears.

⚠ Watch out for sharp edges.



⚠ **Caution.** Risk of injury thrugh burr formation. Reinforcement tape may spring open.

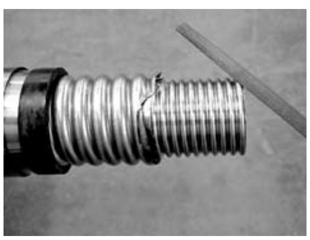
Installation instructions

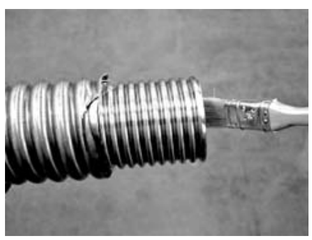
Open Secondary Containment Pipe System

11 Saw back primary pipe
Screw back thrust collar until it stops. Notice that the groove is always in the "12 o'clock" position. Use thrust collar as sawing gage. At the groove point the saw is always in pipe valley. Secure thrust collar with one hand while sawing off the pipe piece.

Attention: The cut has to be in a right angle to the pipe axis. Use smoothing file for deburring.

12 Deburr primary pipe
Remove thrust collar. Deburr pipe end. Remove shavings with brush.



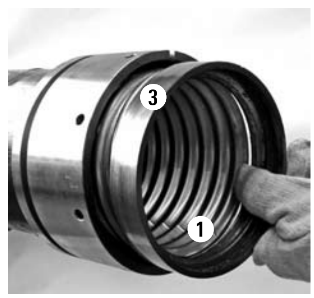


13 Slide on test boot
Push test boot onto the PE jacket until the face side aligns with the secondary pipe.

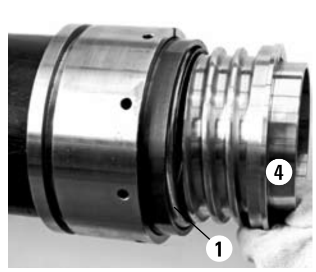
14 Rubber support ring
Thread support ring up to the PE jacket (for 1 ½" and 2" pipes). In lieu of the support ring (for 3") seal the space between secondary pipe and PE jacket with Butyl rubber tape. Make sure to fill the "valley" of the corrugation.

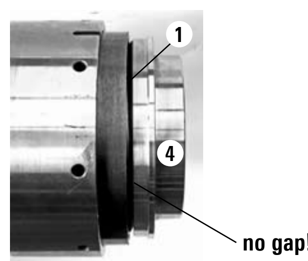
Caution. Sharp edges on the secondary pipe.

15 Establish primary pipe seal
Screw on sealing ring (3) with corrugated pipe geometry ahead until corrugated pipe (1) is visible.

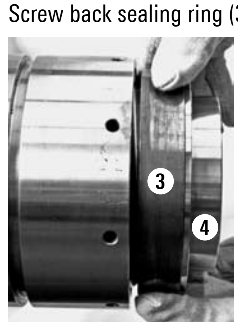


Screw core piece (4) into the corrugated pipe (1) until stop position. The core piece has to fit properly to the corrugated pipe.





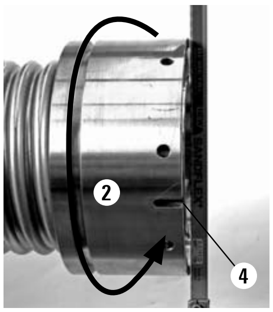
Screw back sealing ring (3) against the arrester of the core piece (4).

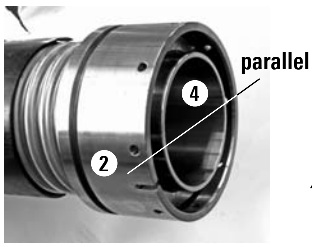


Installation instructions

Open Secondary Containment Pipe System

16 Positioning of the pressure ringfor pipe sizes 1 ½", 2" and 3"
Turn back the pressure ring (2) until it fits properly with the leading edge of the core piece (4). **Work precisely – use auxiliary devices!**





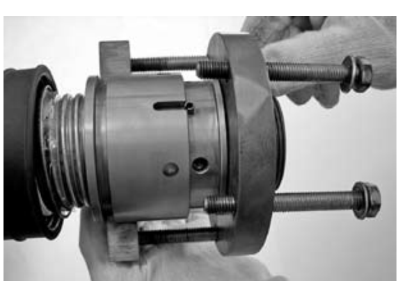
Caution. Risk of injury when spanner wrench slips off.

17 NPT or EZ-Fit connector
Align positioning pin of connector with groove in thrust collar.

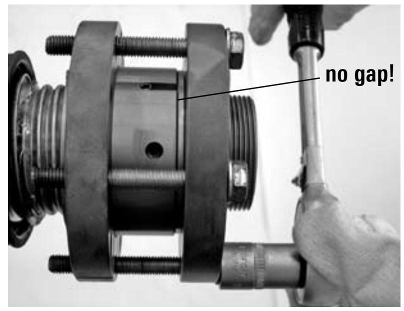
18 Assembly flanges
Setting of assembly flanges. Put the rear split flanges into the slot. **Caution!** Use lubricant on screw thread and in split flange.

Caution. Do not drop split flanges.

Caution. Some lubricants are extremly flammable. Be sure to read warning labels on containers as well as disposal details.



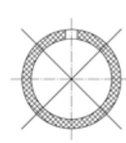
19 Assembly flanges
Tighten screws clockwise alternating until there is no gap **remaining** between connecting piece and thrust collar. Remove flanges after installation.To secure fitting, hammer in all grooved pins.



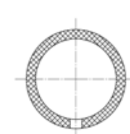
Watch your fingers while hammering in grooved pins.

20 Position test boot
Push back rubber collar over the end fitting. Note that the lip in the test boot snaps into the groove of the thrust collar.

21 Position test boot hole



Incorrect!



Correct!
6 o'clock Position

The hole in the test boot has to face down in the 6 o'clock position.

Installation instructions

Open Secondary Containment Pipe System

22 Assembled fitting
Install clamp in the order 1-2-3 and with the tightening screws on opposite sides.

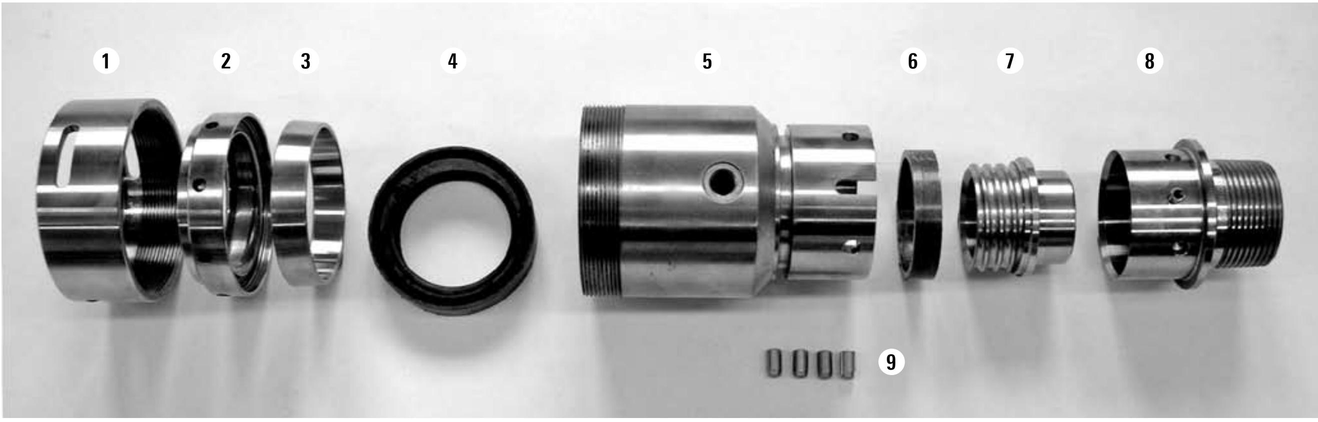
In case a leak occurs in the primary pipe, the fluid will flow out of the rubber collar hole into the sump, which then will typically be indicated by a liquid sensor.

Install nipple in drain hole for leak test of the secondary containment (interstitial space).

Installation instructions

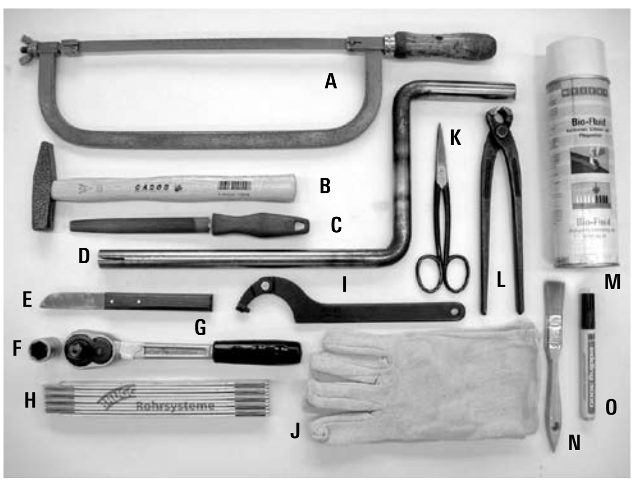
Closed Secondary Containment Pipe System

1 End fitting – components



1 Lock nut
2 Clamping nut
3 Expansion ring
4 Secondary seal
5 Thrust collar
6 Graphite seal
7 Core piece
8 Threaded connector
9 Grooved pins

2 Installation tools



A Hacksaw
B Tinsmith's hammer
C Smoothing file
D Secondary pipe stripping tool
E Safety knife
F Socket ½" (17 mm)
G Socket wrench
H Folding rule
I Spanner wrench
J Gloves
K Metal shears
L End cutting pliers
M Lubricant
N Brush
O Marker

3 Installation tools

Alternative:
Pipe cutter[1)] for plastics

⚠ [1)] Note the warning notices of the manufacturer.

4 Assembly flanges

Flanges to assemble couplings.

BRUGG PIPESYSTEMS
Flexible solutions

Installation instructions

Closed Secondary Containment Pipe System

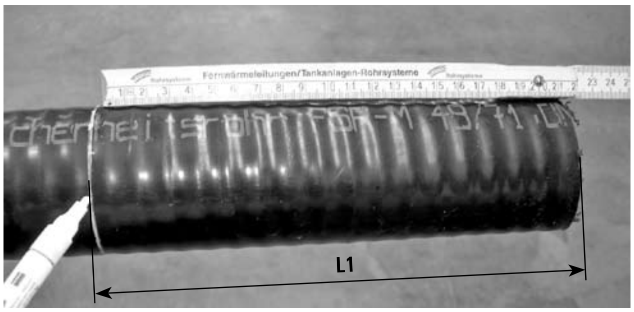
5 Remove PE jacket

Remove PE jacket according to table below

	L1 dimension with	
ND	**Thread**	**EZ-Fit**
1"	8.0	7.8
1 ½"	8.5	8.3
2"	8.9	8.7

All dimensions in inch

Use protective gloves at all times.



6 Remove PE jacket

Take care not to damage the corrugated pipe while cutting the PE jacket. Set knife tangential to PE jacket and start cutting.

Caution. Risk of knife injury.

7 Remove PE jacket

Pull PE jacket away from pipe while perfoming radial cut.

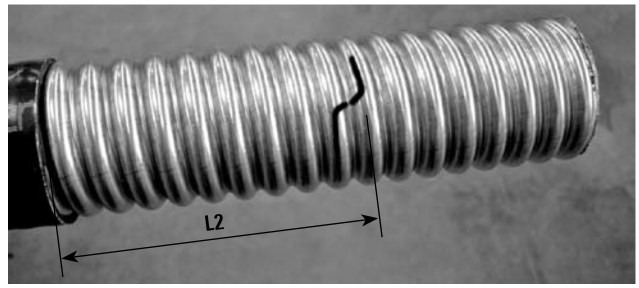
Caution. Do not squeeze fingers between pipe and PE jacket.

8 Remove secondary pipe

Remove secondary pipe according to table:

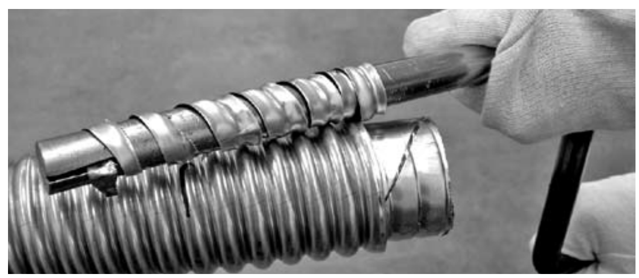
ND	L2
1"	4.7
1 ½"	4.7
2"	4.7

All dimensions in inch



9 Remove secondary pipe

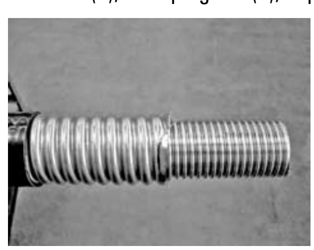
Cut in pipe at crest of a wave at the tube end and bend up the metal strip. This strip should have an appr. length of 2 inch. Straighten metal strip inbet-ween two hammers. Apply secondary pipe stripping tool to metal strip and "peel" down at an angle of 30° to the pipe axis. Cut away flat steel armoring tape along the secondary pipe with plate shears.



10 Install secondary pipe seal

Attention: Install parts in the exact order and position.

Lock nut (1), Clamping nut (2), Expansion ring (3), Secondary seal (4)



Caution. Risk of injury thru burr formation. Reinforcement tape may spring open. Watch for sharp edges.

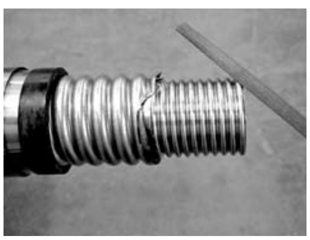
Installation instructions

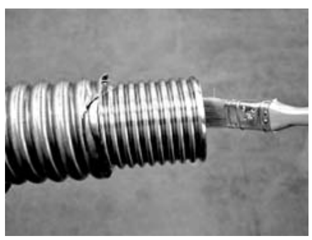
Closed Secondary Containment Pipe System

11 Saw back primary pipe
Screw back thrust collar until it stops. Notice that the groove is always in the "12 o'clock" position. Use thrust collar as sawing gage. At the groove point the saw is always in pipe valley. Secure thrust collar with one hand while sawing off the pipe piece.

Attention: The cut has to be in a right angle to the pipe axis. Use smoothing file for deburring.

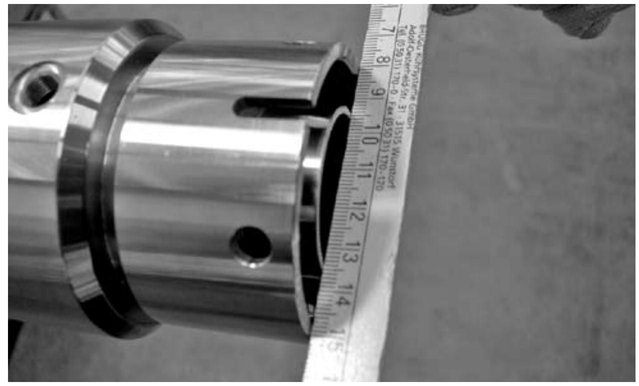
12 Deburr primary pipe
Remove thrust collar. Deburr pipe end. Remove shavings with brush.





13 Establish primary pipe seal
Screw on thrust collar. Insert graphite seal. Screw core piece into corrugated pipe until stop. Tighten support ring slightly with pipe wrench.

14 Thrust collar
Turn thrust collar toward tube end. Face side of core piece and pressure ring have to align. Use spanner wrench if necessary.



15 Marking of position
Mark position of the thrust collar along the corrugated pipe.

16 NPT or EZ-Fit connector
Position split pin in the groove of the connecting piece.

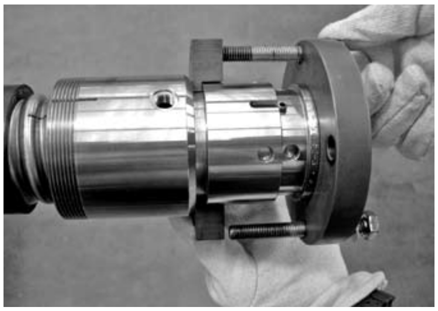
Installation instructions

Closed Secondary Containment Pipe System

17 Assembly flanges

Setting of assembly flanges. Put the rear split flanges into the slot. **Caution.** Use lubricant on screw thread and in split flange.

Caution. Do not drop split flanges.



18 Assembly flanges

Tighten screws clockwise alternating until there is no gap **remaining** between connecting piece and thrust collar. Remove flanges after installation. To secure fitting, hammer in all grooved pins

Watch your fingers while hammering in grooved pins.

19 Rubber seal

Apply lubricant to the secondary seal and expansion ring surfaces. Thread the secondary seal into the thrust collar until stop (appr. 5/16 inch of the rubber seal remains visible). Insert expansion ring into secondary seal.

Some lubricants are extremly flammable. Be sure to read warning labels on containers as well as disposal details.

20 Secondary pipe sealing

Screw back the clamping nut with the spanner wrench. Through this process the expanding ring is being pushed further into the sealing ring to ensure the sealing of the secondary pipe. Leave a gap between clamping nut and thrust collar of about 0.02 inch.

Caution. Risk of injury when spanner wrench slips off.

21 Assembled fitting

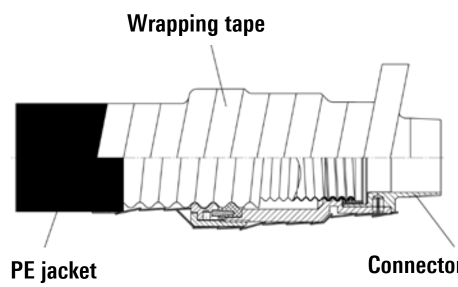
Tighten lock nut with spanner wrench. End fitting is now assembled. R 1/8 connection for leakage test of primary and secondary pipe or for leak monitoring. Remove test port plug only shortly before installing the leak monitoring system.

The monitoring system has to comply with the technical specification of the FLEXWELL®-HL Pipe.

22 Wrapping tape or shrink sleeve

To protect the exposed area between end fitting and PE jacket a wrapping tape of a shrink sleeve should be used. Ideally the end fitting is also wrapped or covered with a shrink sleeve at the same time.

Be sure to read instructions of the wrapping tape manufac-turer.



Start of operation and maintenance

Open Secondary Containment Pipe System

1. Fuels

This pipe system is intended for the following fuels in accordance with UL 971 regulations table 15A.1:

Motor vehicle fuels:	MV
Concentrated fuels:	CT
High blend fuels:	HB
Aviation and marine fuels:	A&M

Where applicable the fuels have to follow the ASTM rules.

The material of construction of the integrated primary and secondary pipe system is 316L or 316Ti stainless steel.

⚠ **Caution:** The suitability of the material of construction of the FLEXWELL®-HL Pipe for other fluids or media has to be investigated and verified.

2. Start of operations of the FLEXWELL®-HL Pipe System

2.1 Leak testing of the FLEXWELL®-HL Pipe System

After installation of the pipe system a leak test has to be performed at a maximum pressure of 100 ± 10 psig in the primary pipe and 6 ± 1 psig in the interstitial space (annular gap between primary and secondary pipe). The test is to be performed with dry air or an inert gas.

⚠ **Caution:** Do not use any liquids or solid materials for the leak test.

⚠ **Caution:** The local rules and regulations for pressure testing have to be strictly adhered to.

2.2 General operating instructions

The operator of a pipe system for flammable or hazardous liquids has to maintain such in proper operating condition and to operate it according to all applicable rules and regulations. The system has to be monitored constantly and necessary maintenance and repair work has to be preformed immediately and, depending on the circumstances, appropriate safety measures have to be taken.

The pipe system may not be operated, if it has deficiencies, which can endanger employees, other persons present or the environment. Appropriate steps have to be taken immediately to eliminate a dangerous condition.

The operator is obligated to issue the necessary orders, to take the necessary steps and to make sure such orders are adhered to to avoid any dangerous conditions.

2.3 Startup of the FLEXWELL®-HL Pipe System

⚠ **Caution:** Startup and commissioning has to be performed in strict accordance with the local rules and regulations.

2.4 Inspections by the operator

The operator inspects the pipe system in required intervals for proper operating condition in accordance with the operating instructions and other regulatory mandates.

In particular he makes sure that,

1. fire protection installations are ready for service and that binder for spilled fluids is available in the specified quantity and at the predetermined location(s),
2. fire alarms are operational,
3. no prohibited materials and objects are located in areas with explosion hazards,
4. pipes and fittings are tight,
   procedure for testing of leaks in the interstitial space (annular gap between primary and secondary pipe) as described in point 2.1
5. the required safety installations are functioning,
6. fire lanes are unobstructed at all times
7. and in explosion hazardous areas bans of smoking and open fires are strictly observed.

2.5 Maintenance of the FLEXWELL®-HL Pipe System

⚠ **Caution:** Maintenance work and intervals have to be performed in accordance with the local regulations.

After completion of cleaning, maintenance and repair work and inspections the installation has to be returned to operating condition.

In particular all the safety devices have to be returned to operating condition.

2.6 Shutdown and taking out of service of the FLEXWELL®-HL Pipe System

Pipe systems, which are shut down, are to be secured in a such a way that they are no danger to employees or others.

⚠ **Caution:** Product pipe may be under pressure after completion of testing.

Start of operation and maintenance

Open Secondary Containment Pipe System

Pipes, which are taken out of service temporarily, are to be emptied and cleaned in such a way that neither an explosive atmosphere exists nor can develop, and that no danger to the environment and groundwater can occur.

Pipes are to be secured against utilization. Leak detection systems and cathodic corrosion protection systems are to remain in operation.

2.7 Problems

If leakage or damage is detected in any part of the system (either by inspection of the sump, a leak detector, or similar monitors), the problems are to be immediately investigated by the site operator.

If leakage or damage to the piping system is verified, the manufacturer must be notified:

Manufacturer: BRUGG Pipesystems, LLC
P.O. Box 1836
Rome, GA 30162-1836
706.235.5606
Pipesystems.na@brugg.com

Open system

A secondary piping system with ends normally open at the sump and a minimum rated pressure of 5.0 psig (35 kPa) in accordance with UL 971 regulations.

If a leaking fluid is detected, the operator is to immediately investigate whether the FLEXWELL®-HL Pipe has a leak.

In case a leak is detected in the pipe, the pipe has to be shut down until the leak is repaired and a leak test to verify the successful repair is performed. Proceed according to point 2.1 for leak testing.

Caution: For the pressure test all local and otherwise relevant rules and regulations have to be observed.

Start of operation and maintenance

Closed Secondary Containment Pipe System

1. Fuels

This pipe system is intended for the following fuels in accordance with UL 971 regulations table 15A.1:

Motor vehicle fuels:	MV
Concentrated fuels:	CT
High blend fuels:	HB
Aviation and marine fuels:	A&M

Where applicable the fuels have to follow the ASTM rules.

The material of construction of the integrated primary and secondary pipe system is 316L or 316Ti stainless steel.

Caution: The suitability of the material of construction of the FLEXWELL®-HL Pipe for other fluids or media has to be investigated and verified.

2. Start of operations of the FLEXWELL®-HL Pipe System

2.1 Leak testing of the FLEXWELL®-HL Pipe System

After installation of the pipe system a leak test has to be performed at a maximum pressure of 100 ± 10 psig in the primary pipe and 6 ± 1 psig in the interstitial space (annular gap between primary and secondary pipe). The test is to be performed with dry air or an inert gas.

Caution: Do not use any liquids or solid materials for the leak test.

Caution: The local rules and regulations for pressure testing have to be strictly adhered to.

2.2 General operating instructions

The operator of a pipe system for flammable or hazardous liquids has to maintain such in proper operating condition and to operate it according to all applicable rules and regulations. The system has to be monitored constantly and necessary maintenance and repair work has to be preformed immediately and, depending on the circumstances, appropriate safety measures have to be taken.

The pipe system may not be operated, if it has deficiencies, which can endanger employees, other persons present or the environment. Appropriate steps have to be taken immediately to eliminate a dangerous condition.

The operator is obligated to issue the necessary orders, to take the necessary steps and to make sure such orders are adhered to to avoid any dangerous conditions.

2.3 Startup of the FLEXWELL®-HL Pipe System

Caution: Startup and commissioning has to be performed in strict accordance with the local rules and regulations.

2.4 Inspections by the operator

The operator inspects the pipe system in required intervals for proper operating condition in accordance with the operating instructions and other regulartory mandates:

In particular he makes sure that,

1. fire protection installations are ready for service and that binder for spilled fluids is available in the specified quantity and at the predetermined location(s),
2. fire alarms are operational,
3. no prohibited materials and objects are located in areas with explosion hazards,
4. pipes and fittings are tight,
   procedure for testing of leaks in the interstitial space (annular gap between primary and secondary pipe) as described in point 2.1
5. the required safety installations are functioning,
6. fire lanes are unobstructed at all times
7. and in explosion hazardous areas bans of smoking and open fires are strictly observed.

2.5 Maintenance of the FLEXWELL®-HL Pipe System

Caution: Maintenance work and intervals have to be performed in accordance with the local regulations.

After completion of cleaning, maintenance and repair work and inspections the installation has to be returned to operating condition.

In particular all the safety devices have to be returned to operating condition.

2.6 Shutdown and taking out of service of the FLEXWELL®-HL Pipe System

Pipe systems, which are shut down, are to be secured in a such a way that they are no danger to employees or others.

Caution: Product pipe may be under pressure after completion of testing.

Start of operation and maintenance

Closed Secondary Containment Pipe System

Pipes, which are taken out of service temporarily, are to be emptied and cleaned in such a way that neither an explosive atmosphere exists nor can develop, and that no danger to the environment and groundwater can occur.

Pipes are to be secured against utilization. Leak detection systems and cathodic corrosion protection systems are to remain in operation.

2.7 Problems

If leakage or damage is detected in any part of the system (either by inspection of the sump, a leak detector, or similar monitors), the problems are to be immediately investigated by the site operator.

If leakage or damage to the piping system is verified, the manufacturer must be notified:

Manufacturer: BRUGG Pipesystems, LLC
P.O. Box 1836
Rome, GA 30162-1836
706.235.5606
Pipesystems.na@brugg.com

Closed, constantly monitored system

A closed system has to be monitored constantly by the installed monitoring system. If the monitoring system indicates a leak in the pipe, the pipe has to be shut down until the leak is repaired and a leak test to verify the successful repair is performed.

Caution: If a leak monitoring system is shut down, the leak tightness of the primary and secondary pipes of the FLEXWELL®-HL Pipe system is no longer monitored. A possible leak will no longer be indicated. This means that, if a leak detection system is shut down, the entire pipe system has to be taken out of service.

Proceed according to point 2.1 for leak testing. For an exact damage analysis it is allowable to pressurize the primary pipe with a maximum pressure of 100 ± 10 psig.