

DRAINAGE SYSTEMS FOR BELOW GROUND



BLÜCHER[®]

A **WATTS** Brand

STAINLESS STEEL DRAINAGE SYSTEMS



BELOW GROUND

BLÜCHER® EuroPipe is the ideal drainage system for below-ground use. The stainless steel systems offers the specifier and installer a metallic push-fit, lightweight and cost effective drainage system for foul and storm water drainage.

Same pipe system below and above ground

The piping system comes in stainless steel grades AISI 316L and AISI 304. BLÜCHER recommends the use of 316L because the risk of corrosion, caused by an aggressive environment, is significantly reduced or eliminated entirely by choosing the molybdenum stainless steel type AISI 316L. For CIP (cleaning in place), test institutes recommend using stainless steel grade AISI 316L, and also local regulations may require the use of AISI 316L.

Lightweight

Because it is truly lightweight, there is no need for “block and tackle” in order to lift BLÜCHER® EuroPipe into position. In most cases one man can move and fit the pipe system as the weight of our products are on average three times lighter than cast iron.

Easy connection

BLÜCHER® EuroPipe is easy to assemble and connect to drains, channels and above-ground pipework without the use of adaptors or connectors. Rodding eyes, drains and access covers are also part of the BLÜCHER® standard range.

Shear resistant

The high tensile strength of stainless steel makes the system resistant to shear breakage and cracking.

Temperature resistant

BLÜCHER® EuroPipe is unaffected by high temperatures. The working temperature range for BLÜCHER® EuroPipe is from -40 °C to 100 °C, dependent on sealing ring material.

Chemical resistance

BLÜCHER® EuroPipe is highly resistant to most aggressive discharge and ground conditions.

Longer pipe lengths

BLÜCHER® EuroPipe is stocked in a range of standard lengths up to 6 m. This provides the installer with fewer joints and adds to BLÜCHER® EuroPipe’s ease of installation.

100% recyclable

Stainless steel is 100% recyclable and due to its long life it is also environmentally friendly. BLÜCHER® EuroPipe is made from stainless steel which has a recycled content over 70% scrap.



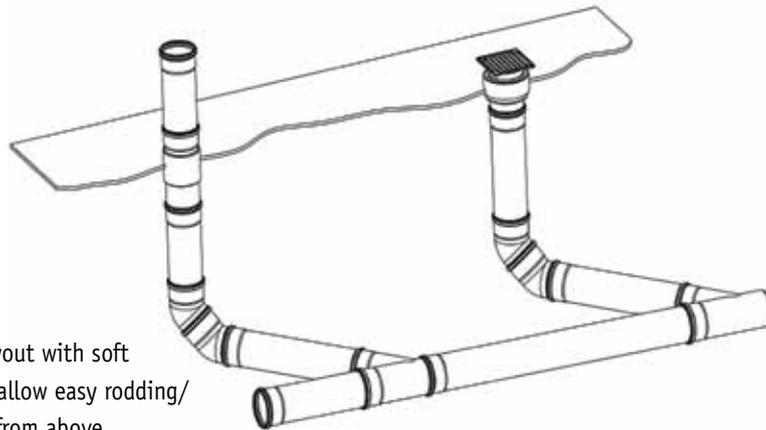


No blockages - easy rodding/cleaning

Using BLÜCHER® drains with removable water traps enables the use of each drain as a rodding point, thus avoiding unhygienic cleaning wells with access covers in hygienic areas inside the building.

If the piping layout is made with soft bends and 45° branches, the pipework system can be cleaned either by jet cleaning or mechanical cleaning by just removing the built-in water trap. Due to the hard stainless steel pipework material without coatings the piping offers the best resistance against mechanical cleaning.

Piping layout with soft bends to allow easy rodding/cleaning from above





PRODUCTS

PIPES AND FITTINGS

BLÜCHER® EuroPipe includes a complete product range of pipes, bends, branches, access fittings and rodding eyes in standard dimensions Ø110, 125, 160, 200, 250, 315 mm and standard lengths ranging from 0,15 m up to 6 m.

BLÜCHER recommends the use of minimum Ø110 mm for below-ground installations. Also local regulations may require the use of minimum Ø110 mm.

Customised items

Customised items are available on request.

Tools

Our electric or manual BLÜCHER® pipe cutter is used to cut pipes to lengths and bevel pipe ends for jointing.

SELECTED PIPES

Description	Length	Item No.
Straight pipe 110	1000	811.100.110 S
Straight pipe 110	1500	811.150.110 S
Straight pipe 110	2000	811.200.110 S
Straight pipe 110	3000	811.300.110 S
Straight pipe 110	4000	811.400.110 S
Straight pipe 110	5000	811.500.110 S
Straight pipe 110	6000	811.600.110 S
Straight pipe 125	1000	811.100.125 S
Straight pipe 125	1500	811.150.125 S
Straight pipe 125	2000	811.200.125 S
Straight pipe 125	3000	811.300.125 S
Straight pipe 125	4000	811.400.125 S
Straight pipe 125	5000	811.500.125 S
Straight pipe 125	6000	811.600.125 S
Straight pipe 160	1000	811.100.160 S
Straight pipe 160	1500	811.150.160 S
Straight pipe 160	2000	811.200.160 S
Straight pipe 160	3000	811.300.160 S
Straight pipe 160	4000	811.400.160 S
Straight pipe 160	5000	811.500.160 S
Straight pipe 160	6000	811.600.160 S
Straight pipe 200	1000	811.100.200 S
Straight pipe 200	2000	811.200.200 S
Straight pipe 200	3000	811.300.200 S
Straight pipe 250	1000	811.100.250 S
Straight pipe 250	2000	811.200.250 S
Straight pipe 250	3000	811.300.250 S
Straight pipe 315	1000	811.100.315 S
Straight pipe 315	1867	811.200.315 S
Straight pipe 315	2867	811.300.315 S

Complete BLÜCHER® EuroPipe product range including reducers, couplers and "P" traps can be seen at www.blucher.com and in our product catalogue.





SELECTED FITTINGS

Description	Dim.	Item No.
Bend 15°	110	820.015.110 S
Bend 15°	125	820.015.125 S
Bend 15°	160	820.015.160 S
Bend 15°	200	820.015.200 S
Bend 15°	250	820.015.250 S
Bend 15°	315	820.015.315 S
Bend 30°	110	820.030.110 S
Bend 30°	125	820.030.125 S
Bend 30°	160	820.030.160 S
Bend 30°	200	820.030.200 S
Bend 30°	250	820.030.250 S
Bend 30°	315	820.030.315 S
Bend 45°	110	820.045.110 S
Bend 45°	125	820.045.125 S
Bend 45°	160	820.045.160 S
Bend 45° large radius	200	820.045.200 S
Bend 45° large radius	250	820.045.250 S
Bend 45° large radius	315	820.045.315 S
Bend 87,5°	110	820.090.110 S
Bend 87,5°	125	820.090.125 S
Bend 87,5°	160	820.090.160 S
Bend 87,5° large radius	200	820.090.200 S
Bend 87,5° large radius	250	820.090.250 S
Bend 87,5° large radius	315	820.090.315 S
Long bend 90°	110	821.090.110 S
Long bend 90°	125	821.090.125 S
Long bend 90°	160	821.090.160 S
Branch 87,5°	110/110	839.110.110 S
Branch 87,5°	110/160	839.110.160 S
Branch 87,5°	160/160	839.160.160 S
Branch 87,5°	200/200	839.200.200 S
Branch 87,5°	250/250	839.250.250 S
Branch 87,5°	315/315	839.315.315 S
Branch 45°	110/110	838.110.110 S
Branch 45°	125/110	838.110.125 S
Branch 45°	125/125	838.125.125 S
Branch 45°	160/110	838.110.160 S
Branch 45°	160/160	838.160.160 S
Branch 45°	200/160	838.160.200 S
Branch 45°	200/200	838.200.200 S
Branch 45°	250/200	838.200.250 S
Branch 45°	250/250	838.250.250 S
Branch 45°	315/250	838.250.315 S
Branch 45°	315/315	838.315.315 S

Complete BLÜCHER® EuroPipe product range including reducers, couplers and "P" traps can be seen at www.blucher.com and in our product catalogue.

RODDING EYES AND GASTIGHT DRAINS

The BLÜCHER® range for below-ground applications includes a complete range of rodding eyes and gastight drains. More drains are available in our standard product catalogue or at www.blucher.com.

Customised items

Customised items are available on request.

RODDING EYES AND GASTIGHT DRAINS			
Description	Outlet	Item No.	Handling
Rodding eye 150	Ø75	144.150.075 S	w/nipple
Rodding eye 150	Ø75	144.155.075 S	screw/vacuum handle
Rodding eye 150	Ø110	144.150.110 S	w/nipple
Rodding eye 150	Ø100	144.155.110 S	screw/vacuum handle
Rodding eye 200	Ø160	144.200.160 S	w/nipple
Rodding eye 200	Ø160	144.205.160 S	screw/vacuum handle
Rodding eye vinyl	Ø110	244.150.110 S	w/nipple
Rodding eye vinyl	Ø110	244.155.110 S	screw/vacuum handle
Rodding eyes with 10 mm grate			
Rodding eye 150	Ø110	144.155.110.10 S	screw/key
Rodding eye 150	Ø110 sc	145.155.110.10 S	screw/key
Rodding eye 200	Ø160	144.205.160.10 S	screw/key
Gastight industrial drains with 10 mm grate for concrete			
Drain 200	Ø110	760.452.110 S	vacuum handle
Drain 200	Ø110	760.462.110 S	key
Drain 200	Ø110	763.452.110 S	vacuum handle
Drain 200	Ø110	763.462.110 S	key
Gastight industrial drains with 10 mm grate for epoxy			
Drain 200	Ø110	760.552.110 S	vacuum handle
Drain 200	Ø110	760.562.110 S	key
Drain 200	Ø110	763.552.110 S	vacuum handle
Drain 200	Ø110	763.562.110 S	key
Gastight upper parts with 10 mm grate for concrete			
Upper part 150	Ø110	774.451.000 S	vacuum handle
Upper part 150	Ø110	774.461.000 S	key
Upper part 200	Ø160	774.452.000 S	vacuum handle
Upper part 200	Ø160	774.462.000 S	key
Gastight upper parts with 10 mm grate for epoxy			
Upper part 150	Ø110	774.551.000 S	vacuum handle
Upper part 150	Ø110	774.561.000 S	key
Upper part 200	Ø160	774.552.000 S	vacuum handle
Upper part 200	Ø160	774.562.000 S	key
Gastight upper parts with 10 mm grate for vinyl			
Upper part 150	Ø110	774.651.000 S	vacuum handle
Upper part 150	Ø110	774.661.000 S	key
Accessories			
Key		700.000.001	
Vaccum handle	Ø80	700.000.002	
Vaccum handle	Ø115	700.000.003	



ACCESS COVERS

BLÜCHER® access covers are produced from 2 mm stainless steel providing a high level of stability and durability.

The access covers are designed with “eyes” and a taper fit for easy lifting and access. You can lift the covers manually or choose to use lifting equipment. A sealing ring below the lid prevents smell from spreading and ensures a water-tight solution.

The access covers fulfill the standard EN 124. The cover can be mounted/fitted to the frame, and concrete anchors are pre-mounted for safe construction. Use of concrete C35/C45 guarantees the load class mentioned below.



ACCESS COVERS

Description	Dimension	Item no.	Load
Access cover	300x300	792.030.030	B
Access cover	400x400	792.040.040	B
Access cover	600x600	792.060.060	B
Access cover	800x800	792.080.080	B
Access cover	1000x1000	792.100.100	B
Access covers with tear plate			
Access cover	300x300	793.030.030	B
Access cover	400x400	793.040.040	B
Access cover	600x600	793.060.060	B
Access cover	800x800	793.080.080	B
Access cover	1000x1000	793.100.100	B
Accessories			
Handle for access cover		700.000.006	

ACCESS FITTINGS

BLÜCHER® access fittings are the traditional way of providing access to below-ground drainage under the building footprint or external to the building. Open half-section access liners can be provided if preferred.

ACCESS FITTINGS		
Description	Dimension	Item No.
Access fitting	Ø110	840.000.110 S
Access fitting	Ø160	840.000.160 S
Access fitting	Ø200	840.000.200 S
Access fitting	Ø250	840.000.250 S



Customised items

Customised items, including hatch boxes, are available on request.

INSTALLATION

Filling around the pipe

Filling around the pipe can only start when the position of the pipe has been checked and approved.

Compression

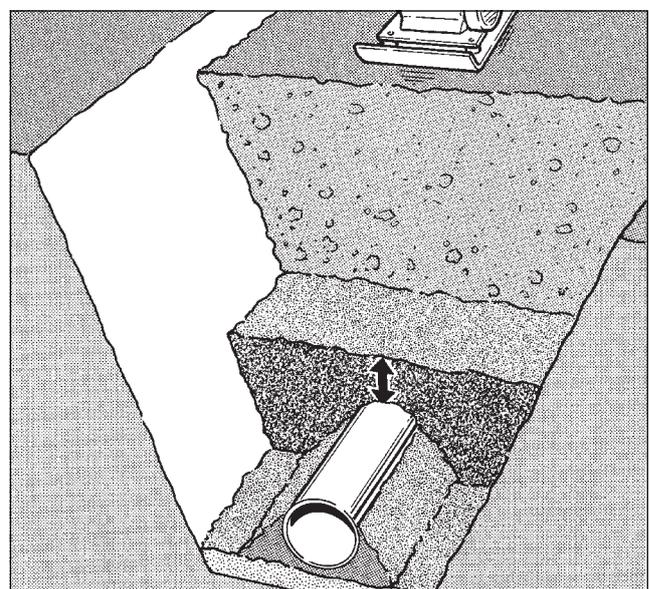
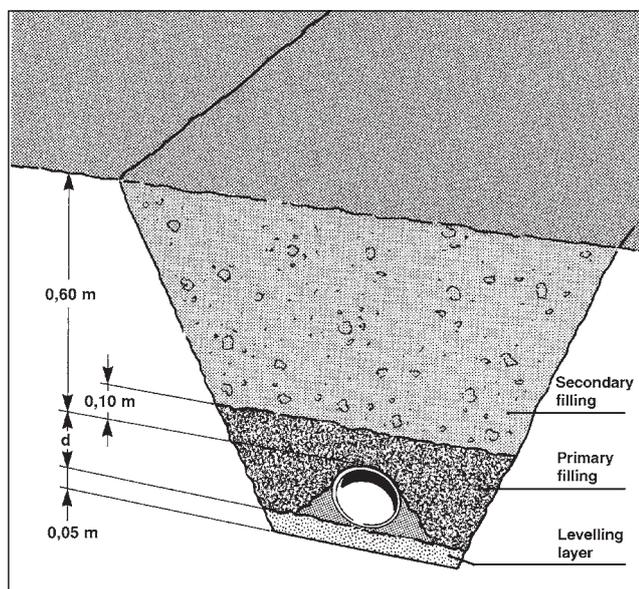
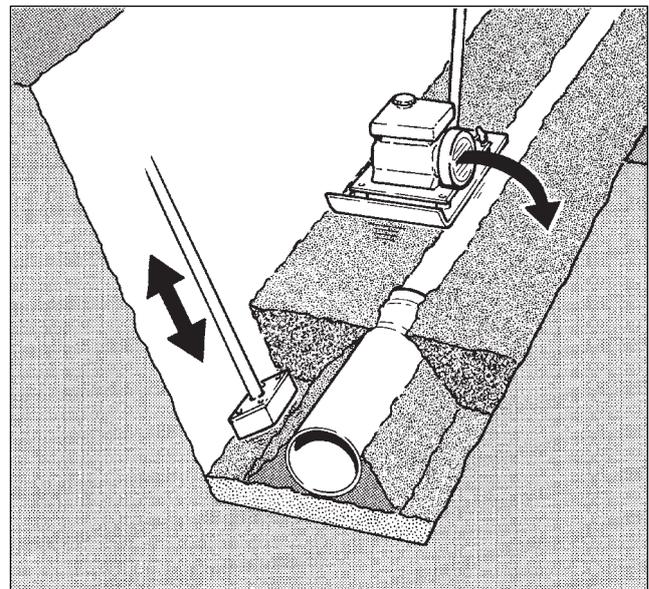
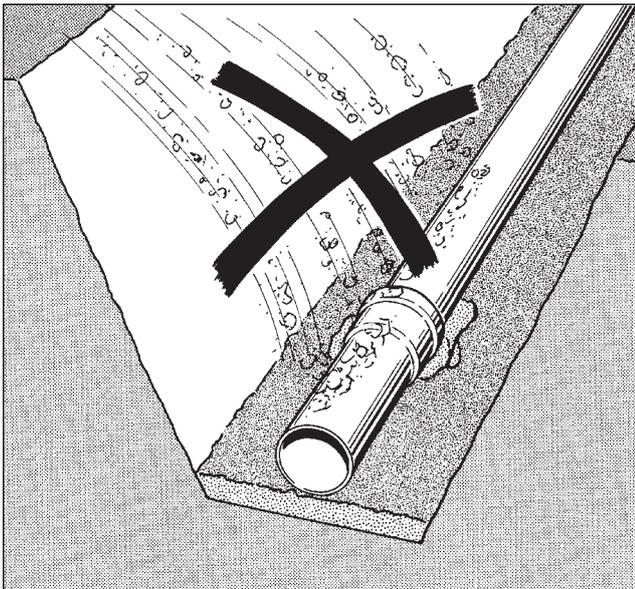
Avoid tipping the filling directly onto the pipe.

If a machine is used for compression, the equipment's own weight and impact force must be adapted to conditions.

The filling should be compressed to at least 93%.

Filling the excavation

Soil from the excavation can be used for filling, but larger stones and blocks are not to be used. Compression of the filling material outside reinforced areas is not necessary if the settling will not cause problems or damage.



MINIMUM SOIL COVERING

VALUES FOR MINIMUM AND MAXIMUM SOIL COVERING

BLÜCHER EuroPipe min and max soil covering [m] according to DS 430

Conditions:
 - Pipe above ground water level.
 - Soil compressed to 93% (standard proctor)

		ø110		ø125		ø160		ø200		ø250		ø315	
		Normal	Heavy										
Density [kN/m ³]	16	0,24	0,37	0,32	0,46	0,33	0,48	0,36	0,51	0,46	0,63	0,43	0,59
		57,92	57,91	51,51	51,49	50,42	50,40	48,60	48,58	21,81	21,77	24,37	24,33
	18	0,24	0,37	0,31	0,45	0,32	0,47	0,35	0,50	0,45	0,62	0,42	0,58
		51,48	51,47	45,78	45,76	44,81	44,79	43,19	43,17	19,38	19,33	21,65	21,61
	20	0,23	0,36	0,31	0,45	0,32	0,46	0,34	0,49	0,44	0,61	0,41	0,57
		46,33	46,31	41,20	41,18	40,33	40,31	38,87	38,85	17,43	17,38	19,48	19,43
	22	0,23	0,36	0,30	0,44	0,31	0,45	0,33	0,48	0,43	0,60	0,40	0,56
		42,12	42,10	37,45	37,43	36,66	36,64	35,33	35,31	15,84	15,79	17,70	17,66

Conditions:
 - Pipe below ground water level. (water level = terrain)
 - Soil compressed to 93% (standard proctor)
 - $\gamma\text{-}\gamma = 8\text{ kN/m}^3$

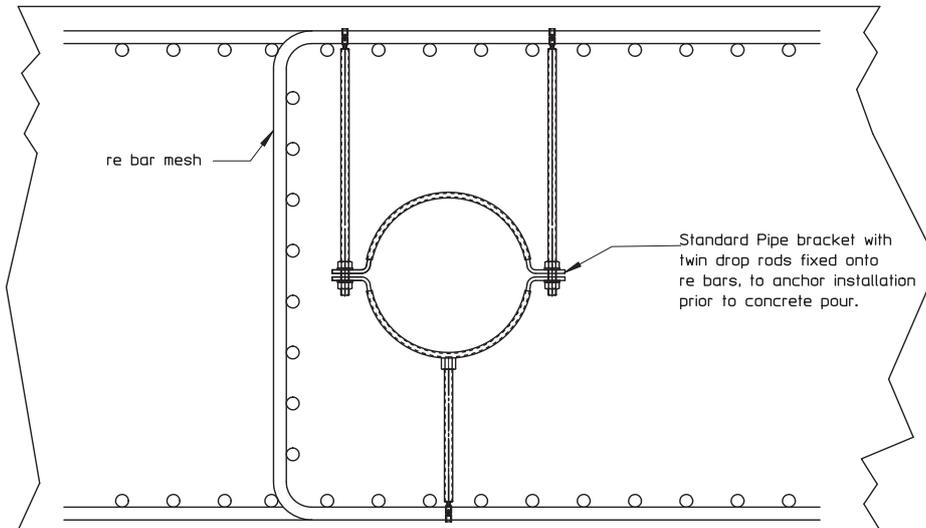
		ø110		ø125		ø160		ø200		ø250		ø315	
		Normal	Heavy										
Density [kN/m ³]	16	0,27	0,41	0,36	0,53	0,38	0,56	0,41	0,60	0,56	0,77	0,52	0,72
		35,18	35,16	30,93	30,89	30,22	30,19	29,07	29,04	13,81	13,74	15,55	15,49
	18	0,26	0,40	0,35	0,52	0,37	0,54	0,40	0,57	0,53	0,73	0,49	0,68
		33,78	33,75	29,80	29,77	29,14	29,11	28,05	28,02	13,07	13,01	14,71	14,65
	20	0,25	0,40	0,34	0,50	0,36	0,52	0,39	0,55	0,51	0,70	0,47	0,66
		32,15	32,12	28,42	28,39	27,80	27,77	26,77	26,74	12,33	12,26	13,86	13,80
	22	0,25	0,39	0,33	0,49	0,35	0,51	0,37	0,54	0,49	0,68	0,46	0,63
		30,49	30,47	26,99	26,97	26,41	26,38	25,44	25,41	11,62	11,56	13,06	13,00

- Minimum soil covering
- Maximum soil covering

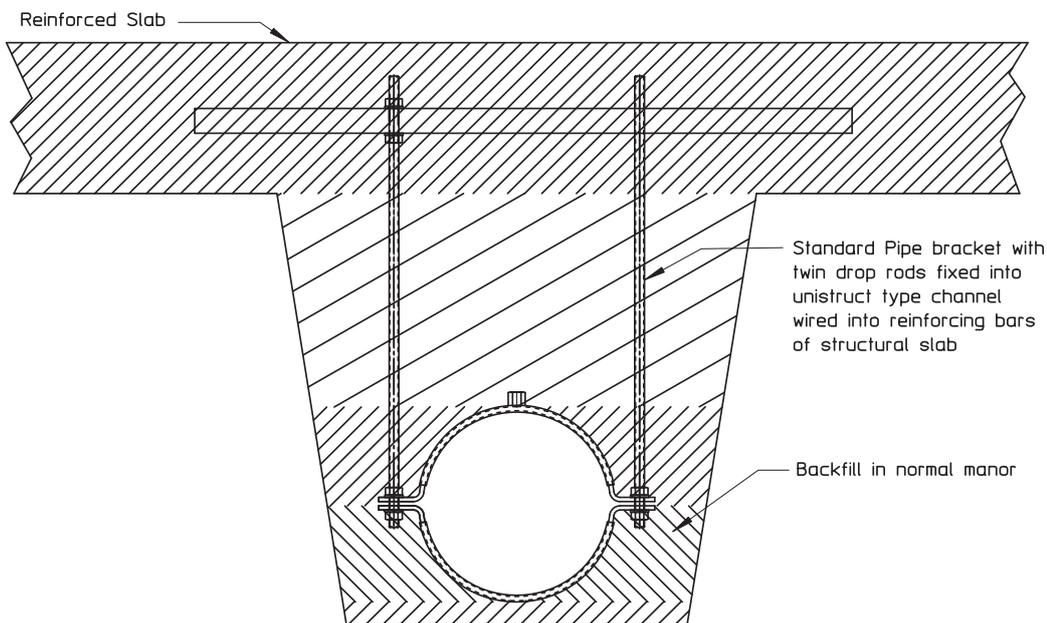
Please note, that ø250mm and ø315mm calculations are based on "slacker pipes" according to DS 430

Where min. values are given in the tables for soil covering, also the frost-free depth must be taken into account.

Pipes cast in raft foundations



Piled ground expected to settle



- Set to line and level on 50 mm bed
- 38 mm water gauge air test
- Pipe brackets and tie rods to hang from slab
- Compact surround or use self-compacting backfill (comp. fraction <0,2)
- Backfill with free-flowing self-compacting material
- Pour slab and catch tie rods

EASY INSTALLATION

1. Cutting

Use BLÜCHER® manual or electric pipe cutter to cut the pipes. The pipes can then be installed without subsequent finishing. NB! Fittings are not to be cut.

2. Check of lip seal

Check that the lip sealing ring is correctly installed in the socket.

3. Cleaning

If necessary, clean lip seal and socket before jointing. Apply lubricant to the spigot.

4. Jointing

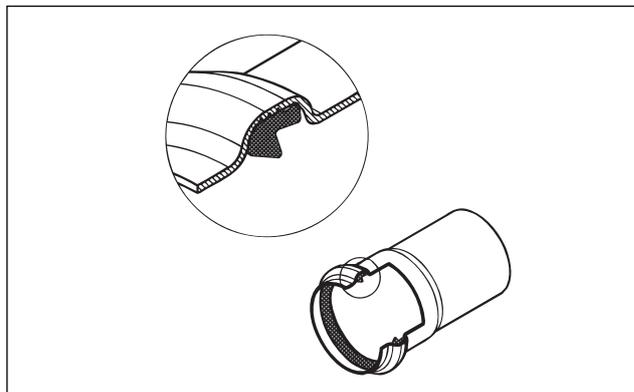
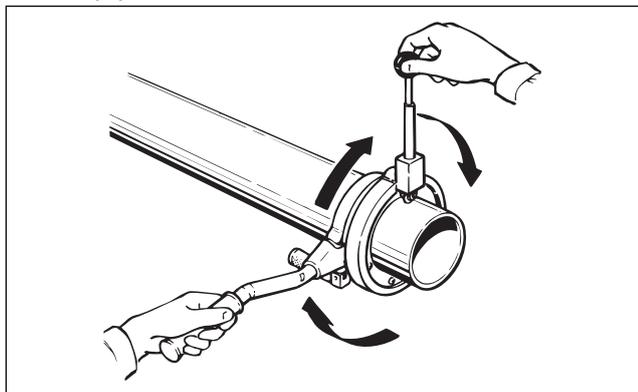
Joint the pipes with a turning movement.

Electric pipe cutter

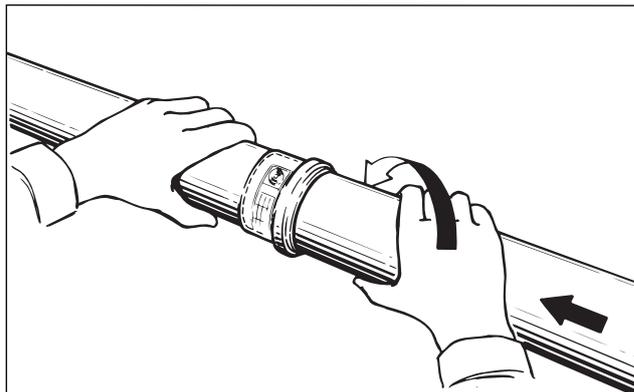
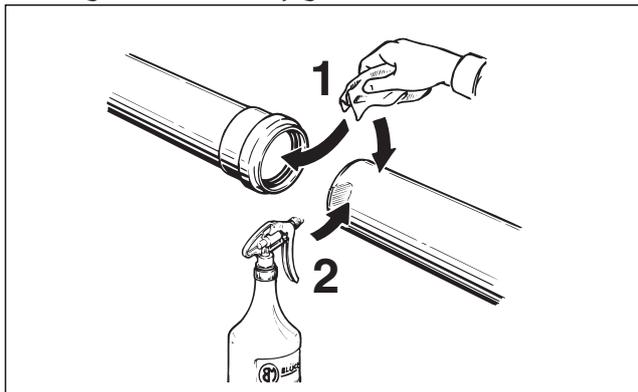


A detailed user guide is provided when buying or hiring an electric pipe cutter.

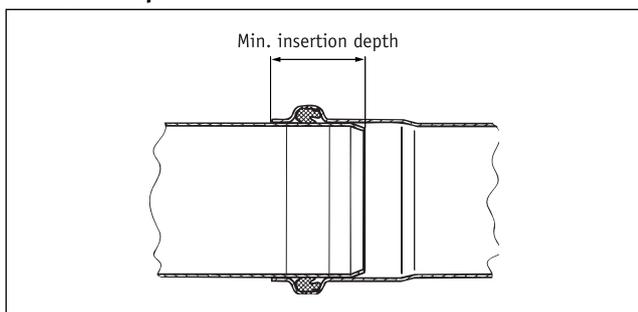
Manual pipe cutter



Jointing of socket and spigot end



Insertion depth



Pipe dimension in mm	Max. insertion depth from end of socket to spigot end	Min. insertion depth from end of socket to spigot end
ø110 mm	62 mm	40 mm
ø125 mm	65 mm	47 mm
ø160 mm	76 mm	50 mm
ø200 mm	98 mm	63 mm
ø250 mm	116 mm	70 mm
ø315 mm	126 mm	80 mm

BLÜCHER®
A **WATTS** Brand

At BLÜCHER® more than 350 employees create an annual turnover of more than 65 million euro.

Through know-how, dedicated service and common sense we develop, produce and market high quality stainless steel drainage solutions for customers within the housing, commercial, industrial and marine sectors all over the world.

Find your local BLÜCHER® specialist at www.blucher.com

BLÜCHER® EuroPipe

BLÜCHER® Channel

BLÜCHER® Drain



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