

FLOWTITE® GRP PIPE AND FITTINGS

INSTALLATION

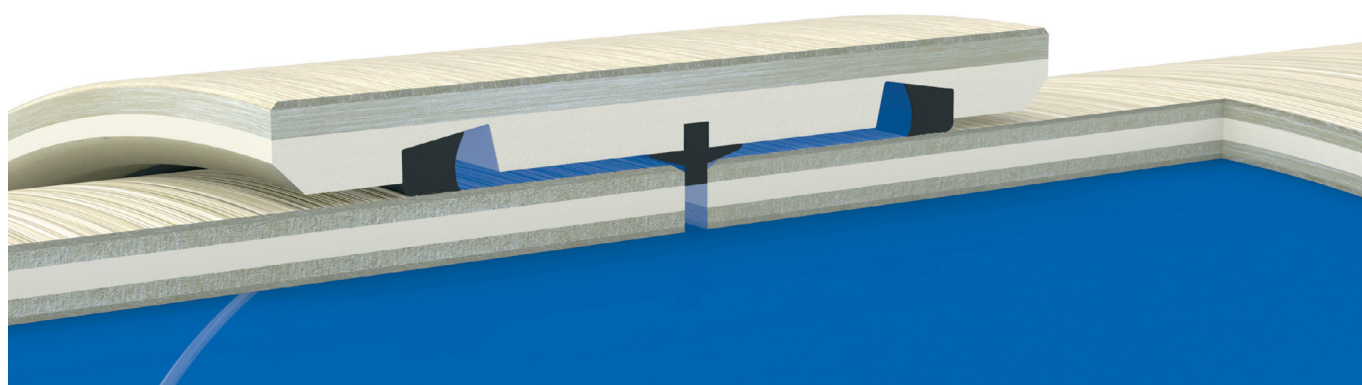
PIPE JOINTING

FLOWTITE® uses a high compression rubber ring jointing system.

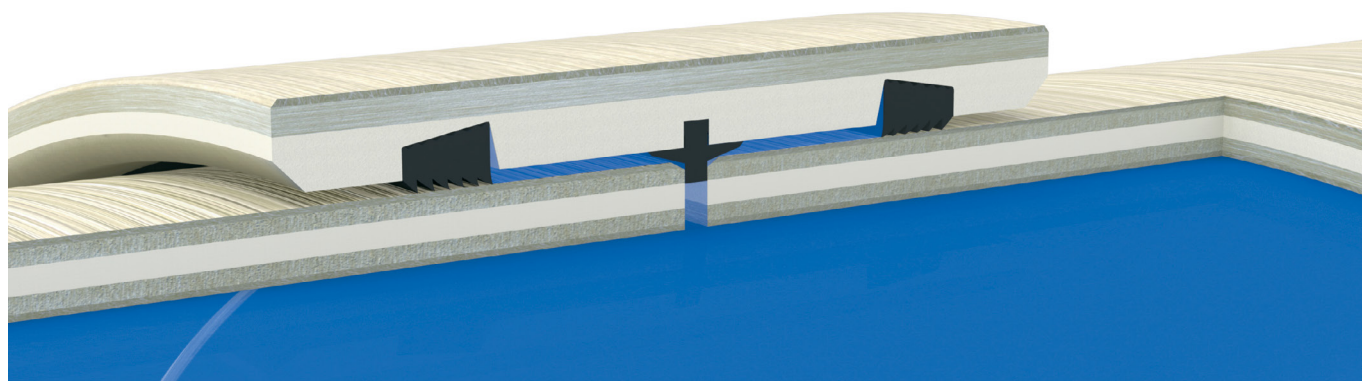
The couplings are normally factory fitted on the pipe, so effectively it is a 'spigot and socket' pipe system. Loose couplings are also available for joining with cut pipes or spigot fittings.

The FLOWTITE® coupling utilises the 'REKA' rubber ring joint design, which has been successfully used for over 85 years.

The coupling is comprised of two sealing rings and a central rubber stop. The rubber stop is not a structural or sealing member of the coupling. Its primary purpose is to protect the pipe ends from being damaged during the jointing process and to ensure the coupling is located centrally over the pipe spigots.



CUTAWAY SECTION OF THE FLOWTITE® PRESSURE COUPLING PRESSURISED



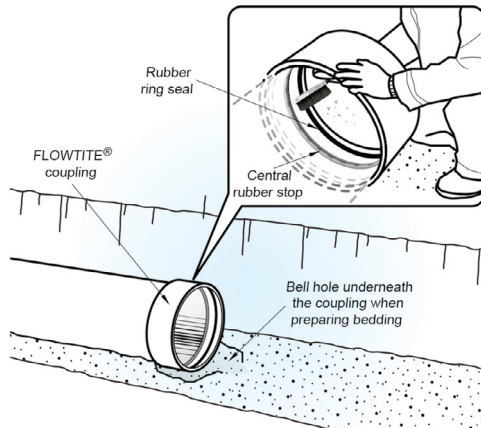
CUTAWAY SECTION OF THE FLOWTITE® PRESSURE COUPLING

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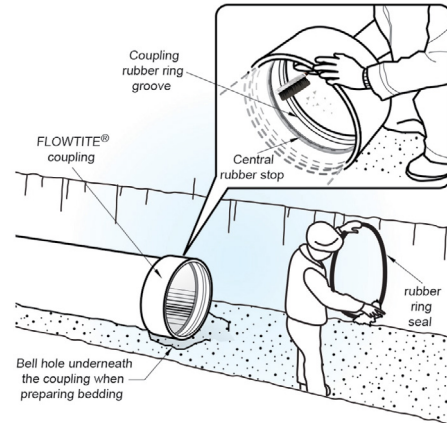
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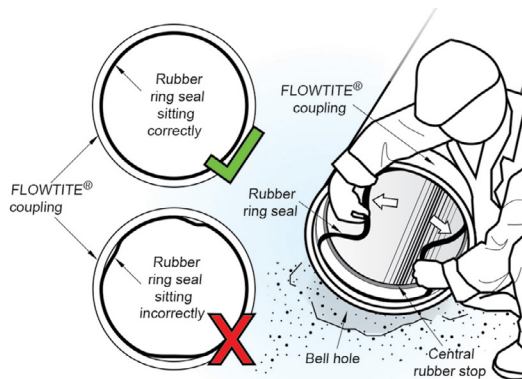
PIPE JOINTING PROCEDURE



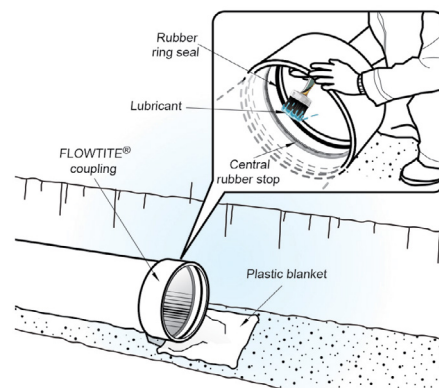
01 Clean the inside of the FLOWTITE® Coupling and the rubber ring seal thoroughly.



01A If necessary, remove the rubber ring from the coupling and clean thoroughly. Clean inside the coupling and the rubber ring groove.



02 Reinsert the rubber ring back into the groove. Check the rubber ring is positioned correctly in the groove.

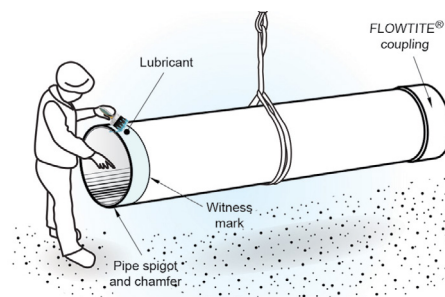


03 Place a plastic blanket underneath the coupling, to keep the area clean. Apply pipe lubricant on the rubber ring seal. (Lubricant must be kept clean at all times).

04 Wipe clean the pipe spigot. Check for any damage.

05 Apply pipe lubricant on the pipe spigot and chamfer up to the witness mark.

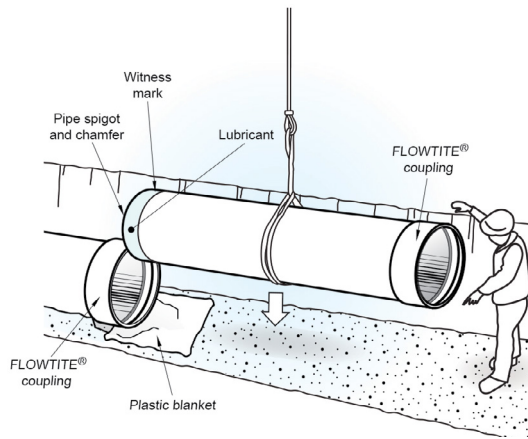
Note: Pipe lubricant must be kept clean at all times.



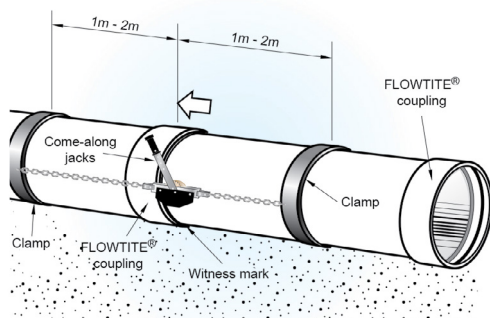
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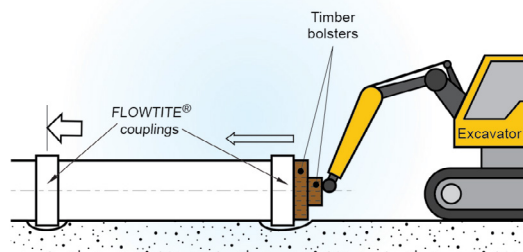
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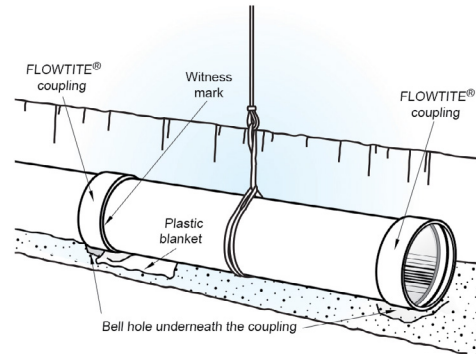
06 Lower the FLOWTITE® pipe in the trench.



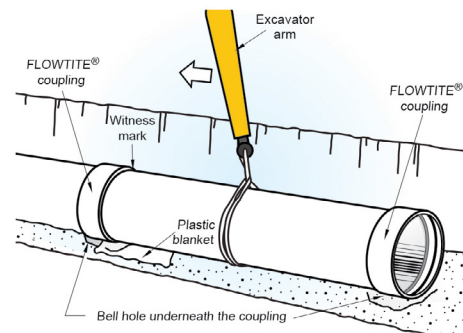
07A Pipe jointing with come-along jacks and clamps.



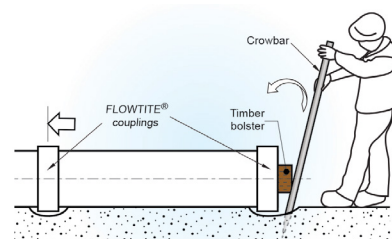
07C Pipe jointing using excavator. (Take care when applying force. Push evenly. **DO NOT JERK!**)



07 Position the spigot within the FLOWTITE® coupling and align the pipe in a **STRAIGHT LINE**. Apply force evenly and ease the pipe 'home' up to the witness mark. If resistance occurs, **DO NOT FORCE OR JERK! CHECK FOR CAUSES** (See Trouble Shooting).



07B Pipe jointing with nylon sling attached to the excavator arm. **ENSURE PIPE IS PULLED IN A STRAIGHT ALIGNMENT.**

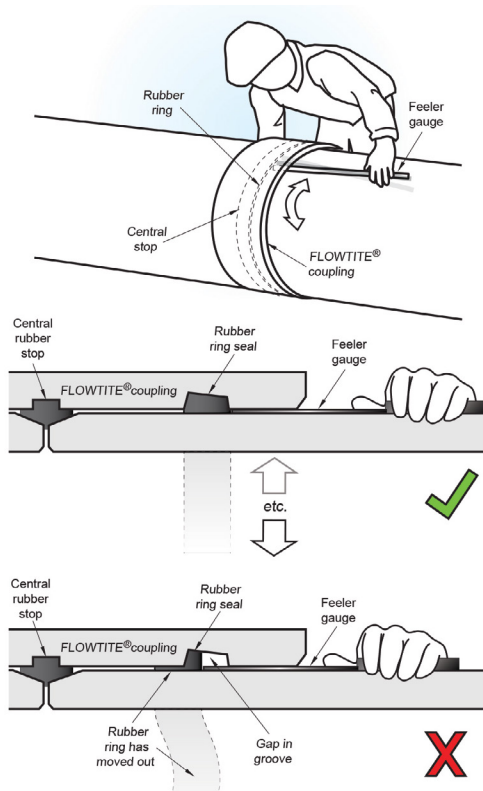


07D It may be possible to use a metal crowbar with a timber bolster to join DN300 FLOWTITE® pipe. Ensure the jointing force is applied against a suitable timber bolster.

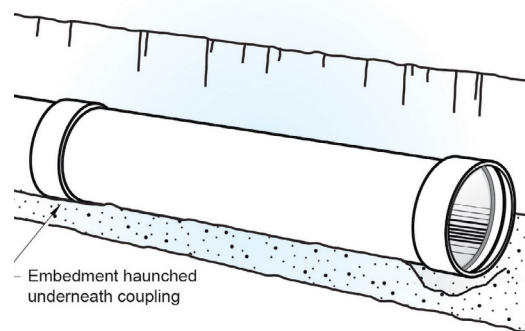
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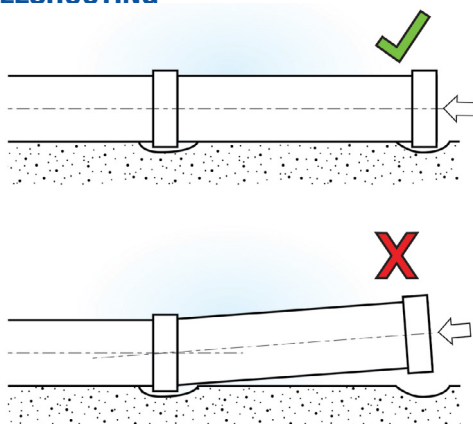


08 Use a 'feeler gauge' to ensure the rubber ring seal is seated correctly.

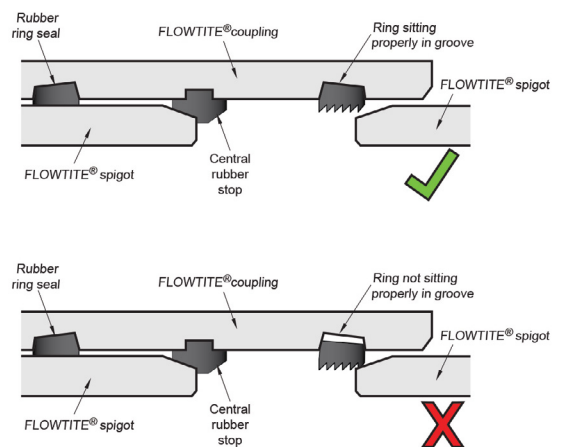


09 Remove the plastic blanket and fill the bell hole with embedment material and haunch tightly underneath the coupling.

TROUBLESHOOTING



01 Check pipe alignment during pipe jointing.

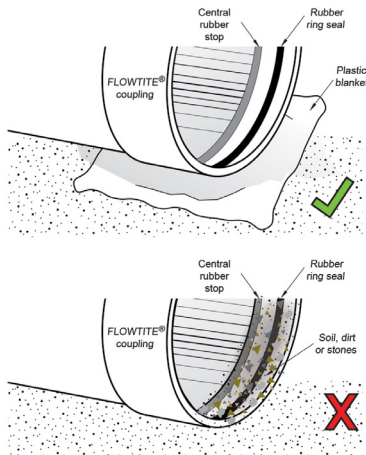


02 Check the ring is seated correctly in the groove.

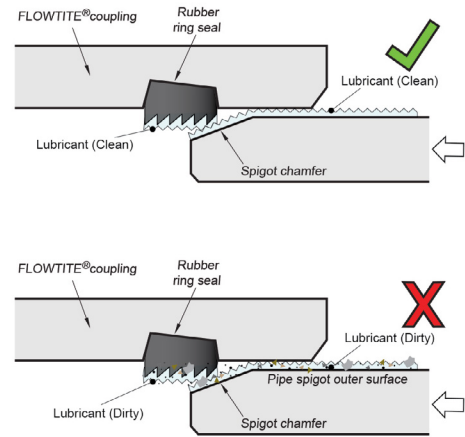
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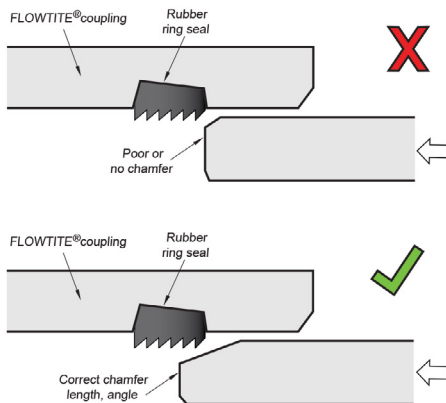
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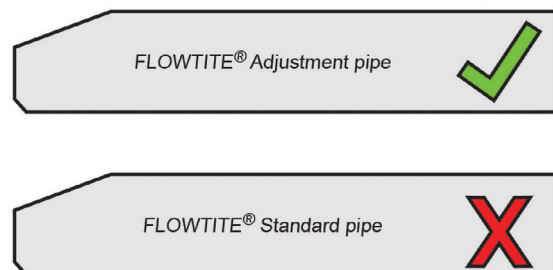
03 Check if the coupling is clean.



04 Check the lubricant on the ring and pipe spigot.

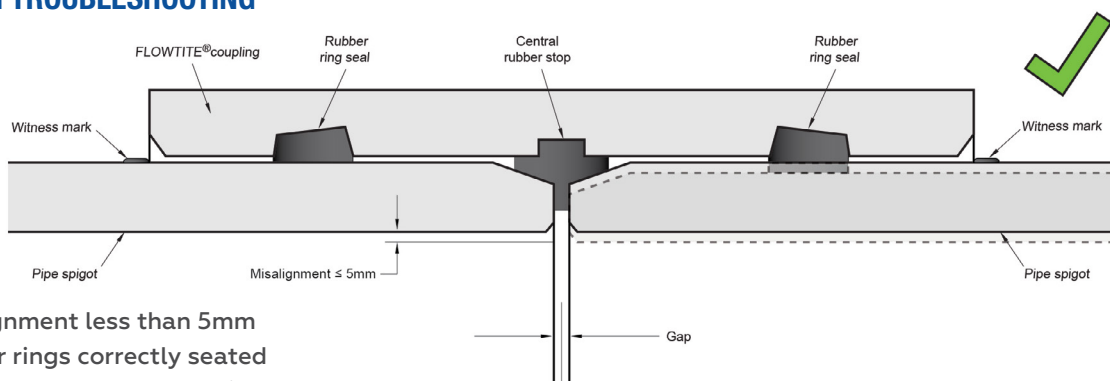


05 For cut pipe ends, check the chamfer.



06 Is the cut pipe an Adjustment pipe?

JOINTING TROUBLESHOOTING



- ✓ Misalignment less than 5mm
- ✓ Rubber rings correctly seated
- ✓ Spigot 'pushed home' to witness mark

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PIPE LUBRICANT

The following table shows the approximate number of joints for each tin of lubricant:

DN	5kg TUB
300	30
375	25
450	20
500	20
525	15
600	15
675	15
750	10
900	10
1000	10
1100	10
1200	10
1300	10
1400	5
1500	5
1600	5
1700	5
1800	5
1900	5
2000	5
2200	5
2400	4
2600	3
2800	3
3000	3

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Approximate jointing forces needed for FLOWTITE® pipe is given below:

DN	APPROXIMATE FORCE (kN)	APPROXIMATE FORCE (kg)
300	6	600
375	8	800
450	9	900
500	10	1000
525	11	1100
600	12	1200
675	14	1400
750	15	1500
900	18	1800
1000	20	2000
1100	22	2200
1200	24	2400
1300	26	2600
1400	28	2800
1500	30	3000
1600	32	3200
1700	34	3400
1800	36	3600
1900	38	3800
2000	40	4000
2100	42	4200
2200	44	4400
2400	48	4800
2600	52	5200
2800	56	5600
3000	60	6000

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JOINT FITTINGS

Spigot ended FLOWTITE® GRP fittings; ductile iron fittings (up to DN750) and mild steel fittings can be joined directly to FLOWTITE® pipes with FLOWTITE® couplings.

Note:

- FLOWTITE® GRP fittings have the conventional witness mark.
- When connecting a mild steel or ductile iron fitting with a FLOWTITE® coupling, the spigot ends should be machined with the same outside diameter and tolerances as a FLOWTITE® pipe spigot.

Socket ended ductile fittings manufactured to AS/NZS2280 are suitable for jointing with FLOWTITE® pipes of diameters up to and including DN750, excluding sizes DN525 and DN675.

In most situations a cut length of pipe may be necessary to accurately place a fitting. e.g. Bend or tee.

Select a FLOWTITE® Adjustment pipe for the length adjustment.

An 'Adjustment pipe' can be cut anywhere along its length and joined directly to the fitting without the need for adaptors or couplings.

Refer to the ductile iron fitting manufacturer's recommendations for witness mark depths.

Place a witness mark on the FLOWTITE® pipe to the recommended depth when joining to a DI Socket fitting.

Flanged fittings, including gate valves, reflux valves etc. can be connected to FLOWTITE® pipes with GRP or ductile iron flanges.

- GRP Flanges are pressure rated E.g. PN16, therefore the rating must be specified when ordering.
- GRP flanges can be 'flat faced' with or without 'O' ring groove and 'stub' with backing rings.
- Metal washers should be used with all flanges.
- Appropriate bolt torques for flanges shall be applied with a torque wrench.
- GRP Flanges are generally thicker than ductile iron flanges therefore longer bolts may be necessary.
- Compressed fibre gaskets should not be used with flat faced GRP flanges.



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