



INTRODUCTION

There are a number of different methods to “repair” a PVC pipe, however the same methods may also be used to install pipe-work. The method described in this article uses a slip coupling, also known as a repair coupling or a “Kimberley socket,” as it applies to an in-line joint after the pipe has been installed. The repair couplings are available in ductile iron for high pressure applications up to 16 bar or fabricated from class 9 (9 bar) PVC pipe for class 4 and class 6 installations. The coupling is called a slip coupling as it comprises two back to back rubber ring sockets and it can slide back over the pipe in order to insert the new “make-up” length of pipe into the line.

If the repair is close to a socket, replace the pipe from the socket to the face of the installed pipe, however if the repair is mid-length, use two repair couplings to install the “make-up piece” of pipe. Once the procedure has been completed, the pipeline may immediately be re-commissioned and used at full working pressure. Replace and carefully compact the excavated fill material to the required level.

STEP 1

ASSEMBLE ALL THE MATERIALS TO ACHIEVE THE REPAIR



- **1 or 2 x Repair couplings:** Ensure the right size and pressure class
- **Replacement length of pipe:** Ensure the right size and pressure class
- **Gel pipe jointing lubricant:**
- **Fine toothed hacksaw and coarse file:**
- **Pencil or felt tipped marker:**
- **Hammer and hardwood batten:**

STEP 2



- **Use the saw to cut out the damaged section of pipe**
- **Use the file to chamfer both the pipe ends of the installed pipe for a mid-length repair**

STEP 3



- Using the coupling and the pencil or marker, mark half the coupling length on both the installed pipe ends to form a depth of entry mark.

Step 4



- Use the gel lubricant and apply a generous amount to the installed pipe end and spread evenly around the entire pipe to beyond the depth of entry mark
- Apply lubricant to the rubber seals of both ends of the repair coupling
- Insert the coupling over the pipe end and push it back over the pipe until it is just behind the seal at the other end and no further. If required, use the hammer and block to assist the process.
- If the repair is mid-length, repeat the above procedure by inserting another slip coupling over the other exposed end of the installed pipe

Step 5



- For a mid-length repair, measure and cut the make-up piece of pipe to be able to fit in-between the inserted repair couplings
- For a single coupling repair, measure and cut the make-up piece of pipe from the face of the installed coupling to the back of the installed pipe socket



- Using the file, chamfer both the pipe ends
- Using the pencil or marker, mark half the coupling length on each end of the make-up piece of pipe to form the depth of entry marks.
- Lubricate both ends with gel lubricant up to the depth of entry marks
- Position one end of the make-up piece of pipe into one of the couplings and align it with the other, using a spacer to support the pipe in position and to avoid getting sand into the joint

Step 6



- Using a wooden batten as a drive, gently tap the coupling back over the make-up piece until it aligns with the depth of entry mark
- Repeat this procedure on the other coupling to complete the repair
- For a single coupling repair, apply gel lubricant to the seal of the pipe socket and Insert one end of the make-up piece of pipe into the socket of the installed pipe
- Align the make-up piece of pipe with the socket and using the hammer and wooden batten, gently tap it into the socket up to the depth of entry mark
- Align the other end with the repair coupling using the wooden batten and gently tap the coupling back over the make-up piece to complete the repair