

Installation Manuals - Couplings

Installation, Storage, Safety & Trouble Shooting Instructions



INSTALLATION

1. Klamflex couplings are not designed to resist end loading or to avoid lateral movement and / or angular displacement of piping systems. Piping systems are to be adequately supported and anchored to eliminate lateral movement and angular displacement.
2. Ensure the pipe ends are correctly prepared. All surfaces with which the gaskets come into contact are to be thoroughly cleaned immediately before coupling installation, thus allowing the gaskets to seal effectively. A distance of one centre sleeve length plus 50mm on each pipe end should be prepared to remove all loose rust, dirt and foreign matter. It is important that the pipe ends be smooth, concentric and within specified tolerances of the pipe manufacturer's specification. It is important that weld beads are ground flush maintaining correct surface profile.
3. Reference marks should be placed on the pipe to facilitate in centring the coupling over the gap between the pipes in accordance with Klamflex setting gaps for each specific coupling.
4. Larger-diameter pipes may become out of round in transportation and handling. Therefore, it is normal to expect to use jacks, wedges, shims, or other means to facilitate assembly of the coupling.
5. The end ring shall be placed on the pipe.
6. A suitable gasket lubricant (such as non-toxic silicone oil) must be applied to the pipe end and the sealing ring; care must be taken to ensure the gaskets are clean. The gasket shall then be placed on the pipe end with bevelled faces toward the centre sleeve.
7. The centre sleeve shall be placed on one pipe end.
8. The pipe end shall be aligned leaving the appropriate gap tabulated in Setting Gaps in the Technical Catalogue and Klamflex Website. Adjustment of the trench bed may be necessary.
9. Where locating plugs are used the setting gap should be increased by 9.5mm for pipe diameter DN300 & smaller & 12.5mm for pipe diameter DN350 and larger to avoid contact with the plugs.
10. The centre sleeve shall be moved into position, centred over the gap with reference to the marks made on the pipe ensuring the installation is central.
11. When the centre sleeve is properly placed, with the gap between the outside diameter of the pipe and the inside diameter of the centre sleeve distributed evenly the gaskets shall be moved into position with the bevelled faces of the gaskets against the centre sleeve end. End rings shall be moved into place behind the gaskets. Bolts shall be installed in the end-ring holes and tightened to the Klamflex recommended torque. To assure correct end ring seating and gasket compression, the bolts must be tightened in pairs at diametrically opposite positions in a circular sequence. Bolt up evenly giving nuts one or two turns at a time to the prescribed torque rating of 65 -80Nm for M12 fasteners & 80 - 120Nm for M16 fasteners. Installation the required torque rating, to provide a leak-proof installation at the specified test pressure. If an effective sealing is not attained at the recommended torque, the coupling shall be loosened, realigned and the bolts retorqued.
12. After pressure testing and depressurising the line and before backfilling Klamflex recommends that the bolt torques are checked again as some pipe movement may have occurred during the pressurisation and depressurisation process.
13. Should a gasket need to be renewed and it is not possible to remove the Klamflex coupling from the pipe, cut a length of the correct profile gasket extrusion (available from Klamflex) to about 5mm longer than the pipe circumference. Wrap the gasket around the pipe and glue the ends together using quickset super glue (Cyanoacrylate). Keep the join at the top of the pipe and re-assemble the coupling as normal. (Do not forget to lubricate the gasket.)

14. If a situation arises where a pipe is extremely undersize and the coupling

is not leak tight as a result of the large tolerance, please note that Klamflex does have different thickness rubber profiles and it may be possible to solve the problem by using a thicker rubber gasket which will take up the excessive tolerance.

15. Should the pipe end gap be too big for the standard Klamflex sleeve, longer sleeve couplings and flange adaptors can be supplied.

STORAGE

- Store in a cool dark place and where possible below 65 degrees Celsius.
- Store away from direct sunlight, electrical discharges and sparking electric motors.
- Always store sealing rings in an unstressed condition, never hang even for a short time.

TROUBLE SHOOTING

- ❗ Check if the fitting is correct for the application – if not, replace with correct fitting.
- ❗ Check if there was any pipe movement – if yes, the pipes must be strapped or restrained and the fitting reinstalled.
- ❗ Check for angular deflection – if yes then the pipes must be strapped or restrained and the fitting reinstalled.
- ❗ Check if gasket is uniformly compressed and end ring evenly tightened – if not the bolts must be loosened and re-tightened as specified in the installation instructions. In some cases, the fitting might have to be strapped or restrained as excessive movement could also dislodge the gasket.
- ❗ Check bolt torques – if not to specified torque, retighten and torque to installation specifications. Ensure that the pipeline is depressurised prior to retightening.
- ❗ Check if fittings are properly aligned – if not loosen bolts, align, and retighten following installation instructions.
- ❗ Ensure that pipe is not oval or out of specification by measuring pipe OD at open end in at least four positions.
- ❗ Check if rubber was correctly installed – if not replace rubber seal and follow installation instructions.
- ❗ Check setting gaps if possible – if incorrect, reinstall using correct setting gaps.
- ❗ Check if lubrication has been used on rubber seal – if not strip fitting and apply lubricant to the outside of the rubber and reinstall as per installation instructions.
- ❗ Check fitting ID – if incorrect, please contact supplier.

DON'T

- ❗ Do not over torque bolts
- ❗ Do not modify or alter any components on the flange adaptor.
- ❗ Do not exceed design nor test pressure.
- ❗ Do not over stretch sealing rubbers, nor expose to open flames.

Installation Manuals - Flange Adaptors



Installation, Storage, Safety & Trouble Shooting Instructions

INSTALLATION

- Ensure the pipe end is correctly prepared. All with which the gaskets come into contact are to be thoroughly cleaned immediately before flange adaptor installation, thus allowing the gaskets to seal effectively. A distance of one centre sleeve length plus 50mm should be prepared to remove all loose rust, dirt and foreign matter. It is important that the pipe ends be smooth, concentric and within specified tolerances (SABS 719-1971 section 5, BS 534-1990 section 14). It is important that weld beads are ground flush maintaining correct surface profile.
- Reference marks should be placed on the pipe to facilitate in centring the flange adaptor over the gap between the pipes in accordance with Klamflex setting gaps for each specific Flange Adaptor.
- Larger-diameter pipes may become out of round in transportation and handling. Therefore, it is normal to expect to use jacks, wedges, shims or other means to facilitate assembly of the flange adaptor.
- The end ring shall be placed on the pipe.
- A suitable gasket lubricant (such as non-toxic silicone oil) must be applied to the pipe end and the sealing ring; care must be taken to ensure the gaskets are clean.
- The gasket shall then be placed on the pipe end with bevelled faces toward the centre sleeve.
- The Flange and Sleeve shall be attached to the mating flange.
- The pipe end shall be aligned leaving the appropriate gap tabulated in Setting Gaps in the Technical Catalogue and Website. Adjustment of the trench bed may be necessary.
- Studs shall be tightened to the Klamflex recommended torque. To assure correct end-ring seating and gasket compression, the studs must be tightened in pairs at diametrically opposite positions in circular sequence. Bolt up evenly giving nuts one or two turns at a time to the prescribed torque rating of 65 – 80Nm (Up to 300NB) and 80 - 120Nm (Over 300NB)
- The tightening sequence assures that the end-ring is pulled evenly to compress the gasket uniformly and to maintain appropriate gap. The tightening of the bolts shall be repeated as many times as necessary to bring all fasteners to the required torque rating, to provide a leak-proof installation at the specified test pressure. If an effective sealing is not attained at the recommended torque, the flange adaptor shall be loosened, realigned and the bolts re-torqued.
- After pressure testing and depressurising the line and before backfilling Klamflex recommends that the bolt torques are checked again as some pipe movement may have occurred during the pressurisation and depressurisation process.

STORAGE

- Store in a cool dark place and where possible below 65 degrees Celsius.
- Store away from direct sunlight, electrical discharges and sparking electric motors.
- Always store sealing rings in an unstressed condition, never hang even for a short time.

TROUBLE SHOOTING

- ❗ Check if the fitting is correct for the application – if not, replace with correct fitting.
- ❗ Check if there was any pipe movement – if yes, the pipes must be strapped or restrained and the fitting reinstalled.
- ❗ Check for angular deflection – if yes then the pipes must be strapped or restrained and the fitting reinstalled.
- ❗ Check if gasket is uniformly compressed and end ring evenly tightened – if not the bolts must be loosened and re-tightened as specified in the installation instructions. In some cases, the fitting might have to be strapped or restrained as excessive movement could also dislodge the gasket.
- ❗ Check bolt torques – if not to specified torque, retighten and torque to installation specifications. Ensure that the pipeline is depressurised prior to retightening.
- ❗ Check if fittings are properly aligned – if not loosen bolts, align, and retighten following installation instructions.
- ❗ Ensure that pipe is not oval or out of specification by measuring pipe OD at open end in at least four positions.
- ❗ Check if rubber was correctly installed – if not replace rubber seal and follow installation instructions.
- ❗ Check setting gaps if possible – if incorrect, reinstall using correct setting gaps.
- ❗ Check if lubrication has been used on rubber seal – if not strip fitting and apply lubricant to the outside of the rubber and reinstall as per installation instructions.
- ❗ Check fitting ID – if incorrect, please contact supplier.

DON'T

- ❗ Do not over torque bolts
- ❗ Do not modify or alter any components on the flange adaptor.
- ❗ Do not exceed design nor test pressure.
- ❗ Do not over stretch sealing rubbers, nor expose to open flames.

Installation Manuals - Dismantling Joints



Installation, Storage, Safety & Trouble Shooting Instructions

INSTALLATION

1. Position the spigot inside the flange adaptor until the front edge of the spigot is flush with the face of the flange adaptor.
2. Position the dismantling joint between the two flanges. Withdraw the spigot until all the free play is taken up, ensuring that the maximum flange to flange dimension is not exceeded.
3. Assemble flange connecting bolts.
4. Insert the tie rods from one side in their appropriate positions. The nuts and washers shall be threaded back onto the tie rod in sequence as they are installed.
5. Tighten the tie rods and flange connecting bolts to the Klamflex recommended torque, the tie rods and bolts must be tightened in pairs at diametrically opposite positions in a circular sequence. Bolt up evenly giving nuts one or two turns at a time to the prescribed torque rating of 65 – 80Nm (Up to 300NB) 80 – 120Nm (Over 300NB).
6. Tighten flange adaptor studs evenly. To assure correct end-ring seating and gasket compression, the studs must be tightened in pairs at diametrically opposite positions in a circular sequence. Bolt up evenly giving nuts one or two turns at a time to the prescribed torque rating of 65 – 80Nm (Up to 300NB) 80 – 120Nm (Over 300NB).
7. After pressure testing the line and before backfilling Klamflex recommends that the bolt torques are checked again as some pipe movement may have occurred during the pressurisation and depressurisation process.
8. Should a gasket need to be renewed and it is not possible to remove the Klamflex Flange Adaptor from the pipe, cut a length of the correct profile gasket extrusion (available from Klamflex) to about 5mm longer than the pipe circumference. Wrap the gasket around the pipe and glue the ends together using quickset super glue (Cyanoacrylate).
9. Keep the joint at the top of the pipe and re-assemble the coupling as normal.
10. Do not forget to lubricate the gasket.

STORAGE

- Store in a cool dark place and where possible below 65 degrees Celsius.
- Store away from direct sunlight, electrical discharges and sparking electric motors.
- Always store sealing rings in an unstressed condition, never hang even for a short time.

TROUBLE SHOOTING

- ❗ Check if the fitting is correct for the application – if not, replace with correct fitting.
- ❗ Check if gasket is uniformly compressed and end ring evenly tightened - if not the bolts must be loosened and re-tightened as specified in the installation instructions. In some cases, the fitting might have to be strapped or restrained as excessive movement could also dislodge the gasket.
- ❗ Check bolt torques - if not to specified torque, retighten and torque to installation specifications. Ensure that the pipeline is depressurised prior to retightening.
- ❗ Check if rubber was correctly installed - if not replace rubber seal and follow installation instructions.
- ❗ Check setting gaps if possible - if incorrect, reinstall using correct setting gaps.
- ❗ Check if lubrication has been used on rubber seal - if not strip fitting and apply lubricant to the outside of the rubber and reinstall as per installation instructions.

DON'T

- ❗ Do not over torque bolts
- ❗ Do not modify or alter any components on the flange adaptor.
- ❗ Do not exceed design nor test pressure.
- ❗ Do not over stretch sealing rubbers, nor expose to open flames.

Installation Manuals - Gripper Block Type

Installation, Storage, Safety & Trouble Shooting Instructions



INSTALLATION

1. Ensure the pipe end is correctly prepared. (HDPE Pipe to Bevelled) All with which the gaskets come into contact are to be thoroughly cleaned immediately before flange adaptor installation, thus allowing the gaskets to seal effectively. A distance of one centre sleeve length plus 50mm should be prepared to remove all loose rust, dirt and foreign matter. It is important that the pipe ends be smooth, concentric and within specified tolerances. It is important that weld beads are ground flush maintaining correct surface profile.
2. Reference marks should be placed on the pipe to facilitate in centring the Flange Adaptor / Coupling over the gap between the pipes in accordance with Klamflex setting gaps for each specific Flange Adaptor / Coupling.
3. Larger-diameter pipes may become out of round in transportation and handling. Therefore, it is normal to expect to use jacks, wedges, shims, or other means to facilitate assembly of the Flange Adaptor / Coupling.
4. The end ring containing the Gripper Blocks shall be placed on the pipe.
5. A suitable gasket lubricant (such as non-toxic silicone oil) must be applied to the pipe end and the sealing ring; care must be taken to ensure the gaskets are clean.
6. The pipe end shall be aligned & pushed in leaving the appropriate gap tabulated in Setting Gaps in the Technical Catalogue and Website. Adjustment of the trench bed may be necessary.
7. The end ring is to be pulled back up the sleeve.
8. Bolts shall be tightened to the Klamflex recommended torque.
9. Restraining block bolts are to be tightened, the bolts are only for gripping action and does NOT affect sealing. Tightening force of the gripper bolts will depend on the pipe material being gripped. Various pipes will require various forces
10. Consult Klamflex for torque recommendations.
11. After pressure testing and depressurising the line and before backfilling Klamflex recommends that the bolt torques are checked again as some pipe movement may have occurred during the pressurisation and depressurisation process.

STORAGE

- Store in a cool dark place and where possible below 65 degrees Celsius.
- Store away from direct sunlight, electrical discharges and sparking electric motors.
- Always store sealing rings in an unstressed condition, never hang even for a short time.

TROUBLE SHOOTING

- ❗ Check if the fitting is correct for the application – if not, replace with correct fitting.
- ❗ Check if there was any pipe movement - if yes, the pipes must be strapped or restrained and the fitting reinstalled.
- ❗ Check for angular deflection – if yes then the pipes must be strapped or restrained and the fitting reinstalled.
- ❗ Check if gasket is uniformly compressed and end ring evenly tightened - if not the bolts must be loosened and re-tightened as specified in the installation instructions. In some cases, the fitting might have to be strapped or restrained as excessive movement could also dislodge the gasket.
- ❗ Check bolt torques - if not to specified torque, retighten and torque to installation specifications. Ensure that the pipeline is depressurised prior to retightening.
- ❗ Check if fittings are properly aligned - if not loosen bolts, align, and retighten following installation instructions.
- ❗ Ensure that pipe is not oval or out of specification by measuring pipe OD at open end in at least four positions.
- ❗ Check if rubber was correctly installed - if not replace rubber seal and follow installation instructions.
- ❗ Check setting gaps if possible - if incorrect, reinstall using correct setting gaps.
- ❗ Check if lubrication has been used on rubber seal - if not strip fitting and apply lubricant to the outside of the rubber and reinstall as per installation instructions.
- ❗ Check fitting ID - if incorrect, please contact supplier.

DON'T

- ❗ Do not over torque bolts
- ❗ Do not modify or alter any components on the flange adaptor.
- ❗ Do not exceed design nor test pressure.
- ❗ Do not over stretch sealing rubbers, nor expose to open flames.

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