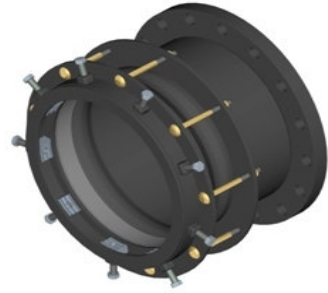
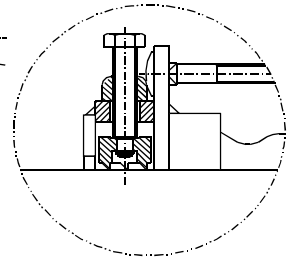
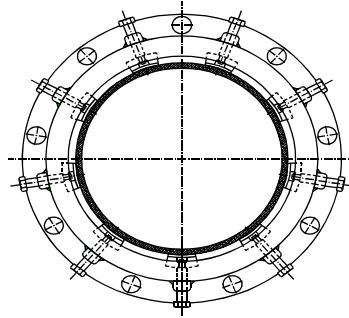


INSTALLATION GUIDE FOR THE "MULTIGRIP-F" FLANGE ADAPTERS WITH END RESTRAINTS



1 Check that the outside diameter of the pipe lie within the range written on the flange adapter label (*)

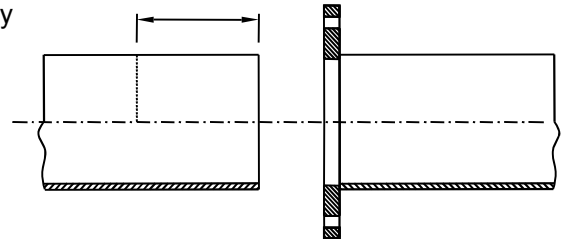
2 Partially unscrew the gripper bolts
THE GRIPPER BOLTS MUST NOT BE TIGHTENED
BEFORE TIGHTENING THE FOLLOWER BOLTS
THE GRIPPERS ARE PAINTED IN RED ON THE OUTER EDGE



3 All weldings and spikes on the pipe spigot have to be smoothed out

4 Remove any grits and dirt cleaning the pipe surface thoroughly where the flange adapter is going to be installed.
The length of the cleaned pipe surface must correspond to the whole length of the flange adaptor.

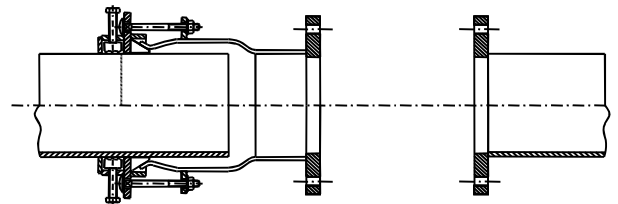
5 Mark the external part of the pipe at a distance equivalent to the total length of the flange adaptor.



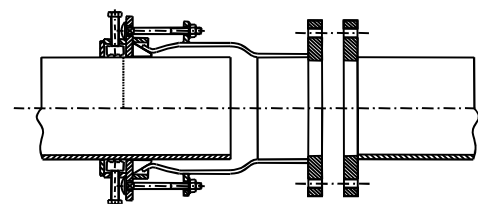
In case of assembling of inner reinforcing liner this marking must not exceed the length of the inner reinforcing liner.

6 Lubricate all accessible faces of the sealing ring.

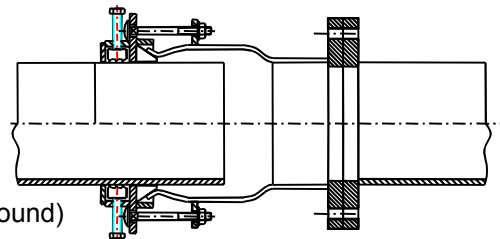
7 Slide the flange adapter onto the pipe socket and over the mark



8 Bring the flanges and the pipes into position until they are approximately 20 mm (0.787 inch) apart



- 9 Slide the flange adapter against the connecting flange and tighten the bolts of the connecting flanges
- 10 Check that the pipe spigot is on the same axis as the flange adapter and use supports if necessary
- 11 Tighten the follower bolts with a torque wrench in a criss-cross fashion increasing the torque gradually in steps of 20Nm (177 inch-pound) every full round to pull the followers evenly.
Check that the follower remains parallel to the flange



RECOMMENDED TORQUE FOR THE COMPRESSION FOLLOWER BOLTS:

M16= 80 Nm (710 inch- pound)

M20 = 100 Nm (886 inch- pound)

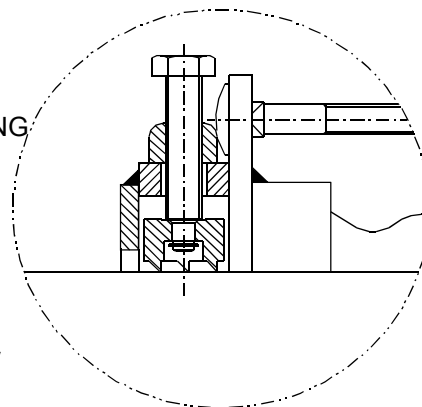
M24 = 120 Nm (1065 inch- pound)

M27 = 140 Nm (1240 inch - pound)

- 12 NOTE: DO NOT TIGHTEN THE GRIPPER BOLTS BEFORE TIGHTENING THE FOLLOWER BOLTS
THE GRIPPERS ARE PAINTED IN RED ON THE OUTER EDGE
PLEASE MAKE SURE THE RED SIDE IS SHOWN BEFORE TIGHTENING

- 13 After having fully tightened the follower bolts to the recommended torque value, tighten the gripper bolts by hand until they all touch the pipe surface.

- 14 Tighten the gripper bolts with the torque wrench in a criss-cross fashion increasing the torque gradually by 20 Nm (177 inch- pound) every full round until the recommended torque value is achieved



IMPORTANT NOTE:

- 15 After having fully tightened the grippers' bolts, it is necessary to check again the compression bolts and close them again in order to achieve the suggested torque.

RECOMMENDED TORQUE FOR THE GRIPPER BOLTS

HDPE/PVC pipes : OD between 289 – 327 mm = 60 Nm (531.04 inch- pound)

> OD 328 mm = 140 Nm (1240 inch-pound)

STEEL/ DUCTILE IRON pipes: > OD 289 mm = 90 Nm (796 inch-pound)

IMPORTANT NOTE: PLEASE ALSO REFER TO THE LABEL ON THE PRODUCT WHERE THERE ARE INDICATED THE SPECIFIC TORQUES

(*) PE pipes require the use of appropriate reinforcing liners

(**) in case of PE pipes, the whole surface of the arch-shaped grippers have to penetrate the plastic pipe so that no space should be seen between each gripper arched surface and the pipe after tightening.
This might be achieved with less than the maximum recommended torque depending on the pipe surface – please check visually.