

Technical Specifications

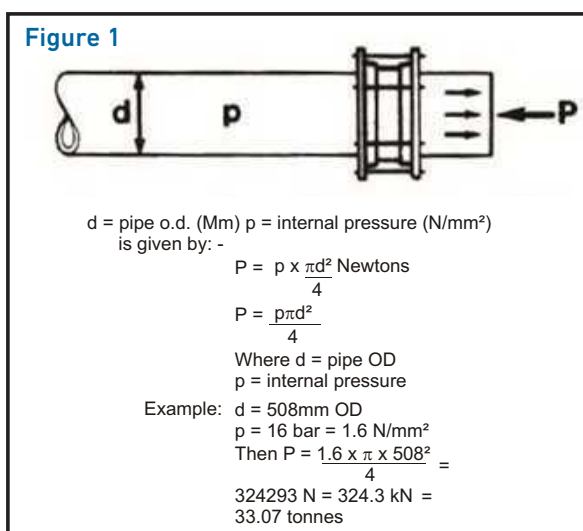
Working Pressure

Working Pressure: This varies with coupling size and material used. Generally working pressure is up to 2/3rds of the maximum test pressure shown in the schedules of dimensions in our catalogue. Couplings are pressure rated to appropriate pipe standards in common use. For higher pressures, special couplings can be supplied.

KLAMFLEX Couplings and Flange adaptors for cast iron mains, carrying water, sewage or gas are suitable for the pressures for which the pipes are normally supplied. Generally flange adaptors are suitable for the pressure ratings of the flange to which they are connected. The pressure ratings stated in this catalogue are hydrostatic test pressures.

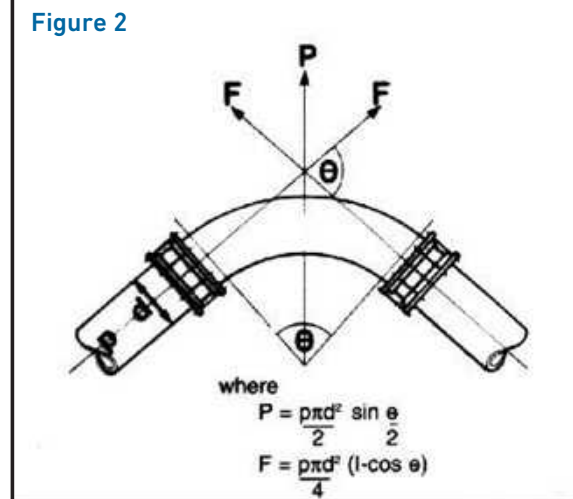
EXPON AND CONTRACTION Pipelines under pressure are subject to forces which tend to separate the component parts. Flexible pipelines, e.g. those jointed with KLAMFLEX Couplings, are particularly subject to forces acting at bends, tees or blank ends. Buried pipelines can generally be restrained by means of anchor blocks at abrupt changes of direction, with the minor forces at each straight joint being restrained by soil friction. With above ground pipelines, it is necessary to take full account of the thrusts produced by internal pressure and where required to restrain them with thrust blocks, anchorage or tie bars.

In the simple case of pressure acting on a blank end, the force P necessary to prevent pipe separation is given by:



KLAMFLEX Couplings are NOT DESIGNED TO RESIST END LOAD due to pressure forces and therefore such forces must normally be resisted by other means. At very low pressures however, friction between coupling and pipe may be sufficient in certain cases.

At a bend there is a force F tending to pull the end outwards. This can result in axial forces F acting to separate the bend from the straight pipe at each KLAMFLEX coupling:



There must be sufficient anchorage to resist either P or both forces F e.g. in a buried system a thrust block may resist F, and above ground, sets of tie rods at each coupling would resist F.

IT IS IMPORTANT TO APPRECIATE THE MAGNITUDE OF THE END THRUSTS WHICH CAN RESULT FROM INTERNAL PRESSURE IN A PIPELINE.

Expansion & Contraction

Each KLAMFLEX coupling will accommodate maximum pipe movement of 10mm and each flange adaptor 5mm. This is achieved by deformation of the sealing ring, not by a sliding action of the ring on the pipe and will cater for expansion and contraction resulting from temperature variations experienced under normal atmospheric conditions.

The resistance to pipe end separation offered by couplings is dependent upon the number of variable installation factors such as pipe surface, pipe tolerance, coupling component tolerances, etc, and is thus different for every case.

For complete safety it is advisable to assume that the worst conditions prevail for each installation.

CARE MUST BE TAKEN TO MAINTAIN SETTING GAPS WITHIN THE LIMITS GIVEN ON PAGE 5.

Excellence in Flow

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