

For some years now flexible tubing has been used to connect racking pipework to the main distribution mains to cater for any movement that may occur within the racking. In more recent times the idea of flexible pipework has been introduced to feed sprinkler heads within false ceilings. It is claimed that it is an easier, quicker and cleaner method of introducing the sprinkler head to the centre of the ceiling tile and making a flush connection to the tile. There are mixed views on the use of these flexible connections and many of the doubts arise from poor installation work. This Information File is intended to outline the essential installation practices which must be utilised in order to ensure that the installation operates effectively and is acceptable to the Authority Having Jurisdiction.

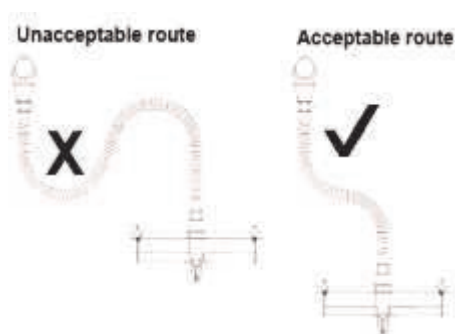
Flexible sprinkler connection assemblies must be LPCB approved to LPS1261 and installed to the **manufacturer's instructions**. They are an extension of the distribution pipe work and must be subjected to the same best design and installation working practices.

Sizing of Pipe Work

In pre-calculated systems installed to tables, all rigid pipe work up to the flexible must be sized as a distribution pipe, minimum 32mm diameter.

Distribution Pipe Work Outlet Size

In pre-calculated systems, all outlet connections must be 32mm (R1.1/4). (NB. This allows for rigid pipe work to be extended or traditional arm over to be fitted when necessary)



Outlet Orientation

The outlet should be installed in the 180 degree arc above the horizontal centreline of the range pipe.

Where circumstances dictate otherwise TB227 allows for outlets below the centreline, however, the route of the flexible must have a constant vertical fall to the sprinkler outlet.

Flexible Length Sizing

TB227 calls for the installation of the most appropriate length of flexible to suit the distance between the range pipe outlet and ceiling level. The maximum lengths of flexible sprinkler connections for pre calculated and fully hydraulically calculated systems are given in the LPCB Red Book under the manufacturers listing.

No Combined Lengths

Flexible connections must not be joined together to make longer lengths. The appropriate length must be installed or the range pipe extended.

Minimum Bend Radius

The minimum bend radius must be observed. TB227 calls for an effective Minimum Radius Indicator to be fitted to all minimum radius bends.



Bend Angle Restrictions

Based on the pressure loss tests to determine equivalent pipe lengths, each manufacturer's LPCB Red Book listing shows the total bend angle limits. The manufacturer's installation instructions also show these maxima which must not be exceeded.

Permanent Deformation

No kinks are allowed. If the flexible cross section becomes compromised (e.g. open area reduced by a kink), it must be discarded and replaced.



Inspection Access

Conventional lift out tile ceilings by design afford good access. Plasterboard ceilings should include a suitably positioned access point to allow inspection of a complete zone. Alternatively a sealed plasterboard ceiling can be installed following an inspection and acceptance by the Authority Having Jurisdiction.



Support Bar and Brackets

The manufacturer's ceiling support brackets and bar must be used. Please refer to manufacturer's installation instructions for intermediate support requirements.

Training

Design and installation personnel must be trained and certificated in the correct procedures for the model of flexible sprinkler connections being installed.

Presented by:



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