



The Trouble of Mixed Installations

Fire protection for installations consisting of non-combustible cast iron down pipes and combustible plastic connection pipes

What are Mixed Installations?

In pipeline installation, e.g. potable water distribution within a building, it is common practice to decide for one brand and to use it throughout the building wherever possible. However, for building drainage in Germany and other European countries, plumbers sometimes apply so-called mixed installations: cast iron down pipes, and plastic horizontal connecting pipes.

Although there are no discernible technical advantages to this material combination, there is a strong preference for this kind of installation particularly in blocks of flats and similar buildings in Germany.

However, German authorities have recognized that this combination of combustible and non-combustible materials in one drainage pipe installation shows particular risks in case of a fire, with the plastic pipes being the weakest "chain link". When installed with the fire penetration seals that are approved for cast iron pipe installations, the insufficient heat resistance of the plastic pipes may cause a fire flashover.

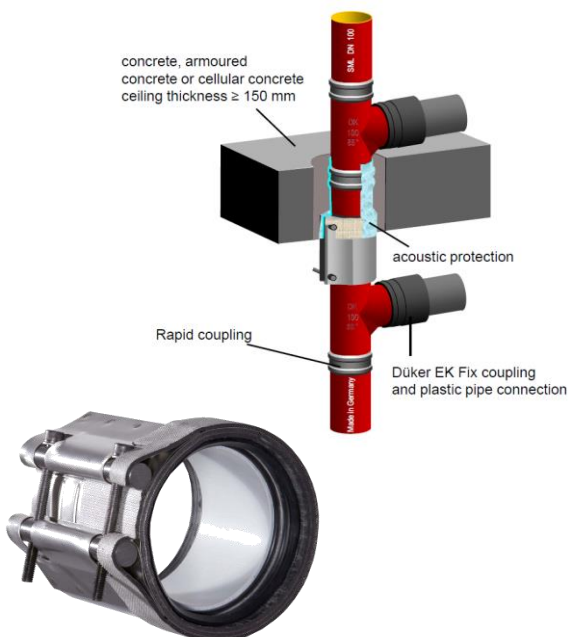
Therefore, since 2013, specially approved penetration seal solutions need to be installed on mixed installations in Germany.

All solutions that were developed are based on the usual fire protection collar for plastic pipes, with intumescent material that, when heated, closes the pipe diameter down and therefore provides a thermal insulation. The intumescent material may be installed so it closes down the downpipe below the ceiling, thus protecting the whole installation above the ceiling from excessive heat; or it may only close down the horizontal plastic pipe, thus preventing a fire but requiring installation behind at least a gypsum wall to protect the room from the heat.

Although fire protection is much easier on pure cast iron installations, and although we do not recommend mixed installations, we will show you some approved fire protection solutions for mixed installations in the following:

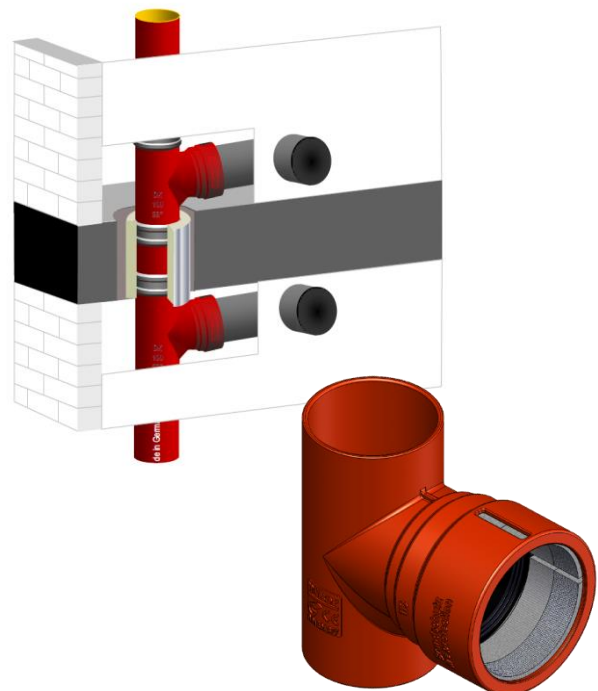
Düker Fire Protection Coupling BSV 90

EI90 for vertical ceiling perforations
cast iron pipe DN 80 up to DN 150
German approval abZ DIBt Z.19.17-1893
available from Düker



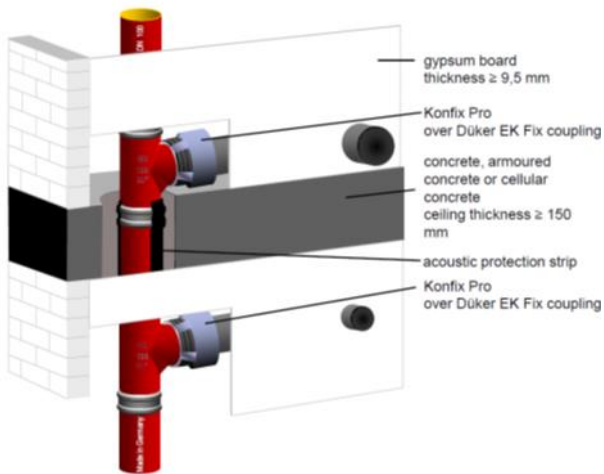
Düker Fire Protection Branch

Prototype – the all-in-one solution
EI90 for vertical ceiling perforations
cast iron pipe DN 50 up to DN 150



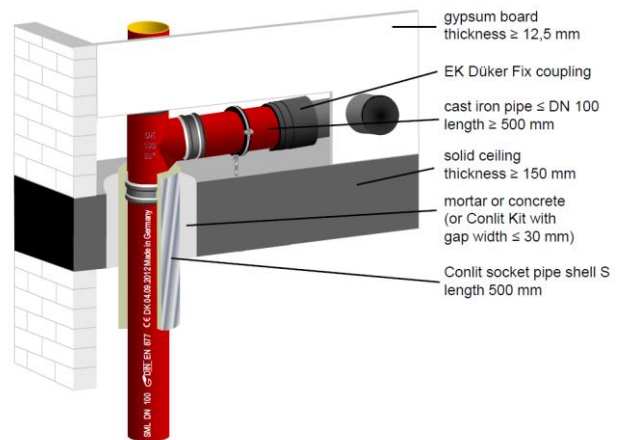
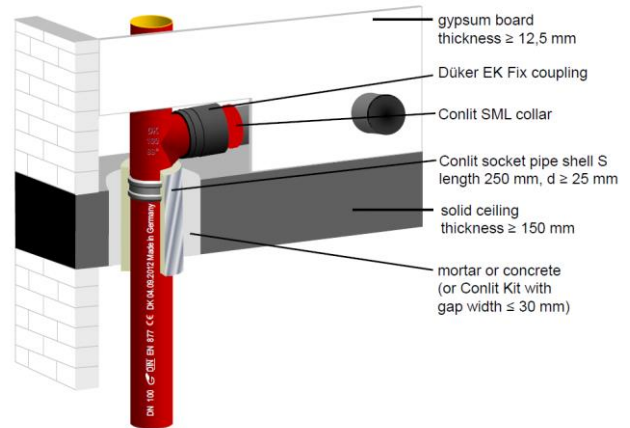
Doyma Curaflam® Konfix Pro

EI90 for vertical ceiling perforations
 cast iron pipe up to DN 150
 connecting pipe DN 50 up to DN 100
 German approval abZ DIBt Z.19.17-2074
 available from Düker or Doyma



Rockwool solutions for mixed installation

EI 90 for vertical ceiling perforations
 cast iron pipe up to DN 100
 connecting pipe up to DN 100
 German approval abZ DIBt Z.19.17-2084
 available from Rockwool





DRAINAGE TECHNOLOGY



GLASS LINING TECHNOLOGIES



JOBGING FOUNDRY



FITTINGS AND VALVES