

DROP IN FIRE COLLARS

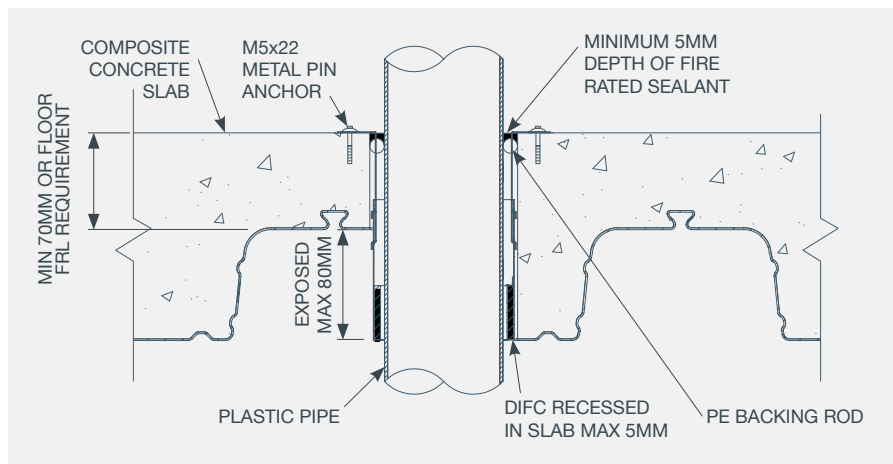
Allproof Drop In Fire Collars (DIFC'S) provide a simple and effective passive fire rating option for thin concrete floors or trapezoidal steel tray concrete floors. These composite floors feature profile changes on the underside of the slab and make it difficult to fire rate with a conventional fire collar fixed to the underside of a floor slab.

INSTALLATION INSTRUCTIONS:

1. Core drill hole to specified diameter to suit pipe size.
2. Install drop in fire collar fixing with two metal pin anchors. (Floor waste installs require the tabs to be recessed into the slab).
3. Ensure collar on underside of slab is exposed no greater than 80mm and recessed in slab no more than 5mm.
4. Insert pipework through collar.
5. Seal gaps between concrete/collar and collar/pipe with a minimum 5mm depth of Allproof MAS310 or Bostik Fireban One intumescent sealant.
6. Allproof recommends any thermal or acoustic lagging maintains a 50mm separation to the fire collar.



COMPOSITE FLOOR INSTALLATION DETAILS:



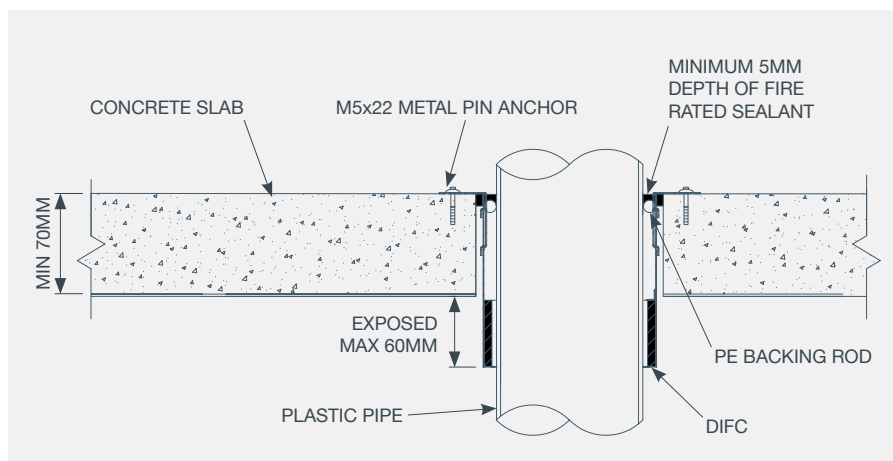
SUITABLE FOR FITTING WITHIN:

- Thin concrete floors (minimum 70mm)
- Trapezoidal steel tray concrete floors (composite floors)

FEATURES:

- Installed and fixed from top side of slab
- Can be retrofit around pipe
- Made from Galvanised steel

FLAT SLAB INSTALLATION DETAILS:



DIFC COMPOSITE FLOOR RESULTS:

Allproof DIFCs have been tested and assessed to provide a passive fire protection system for composite floor penetrations on a range of plumbing services. The assessment found that Allproof DIFCs FRL is equal to the FRL of composite floor with tray profiles of 60mm, 80mm and 210mm.

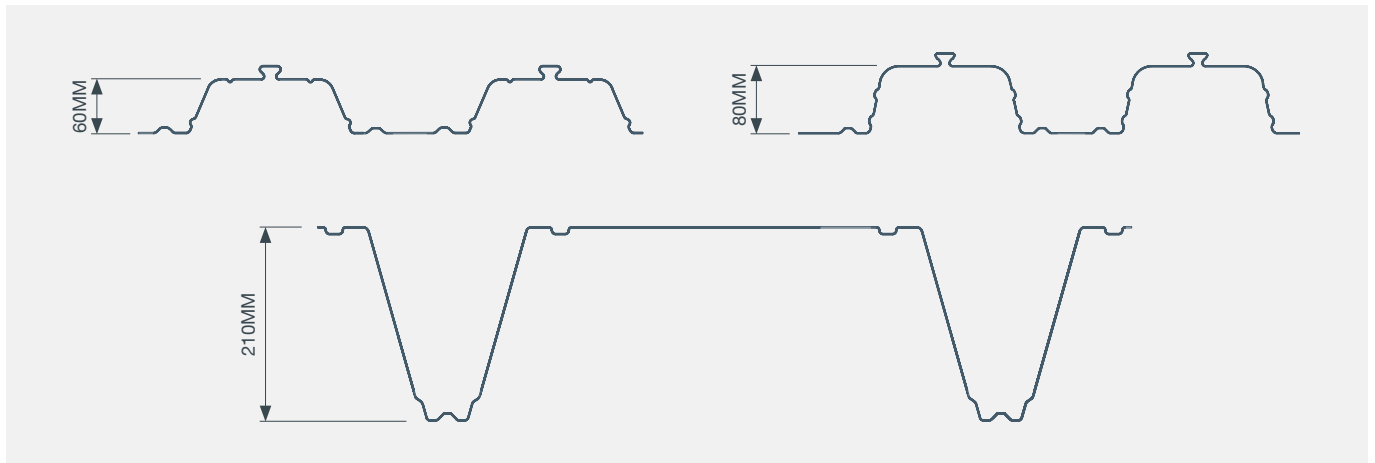
Tray FRL's are variable by adjusting the minimum depth at the shallowest section of the profile, refer to tray suppliers documentation for further information. Allproof DIFC's have been assessed to be equal to the floor FRL to a maximum of 120 minutes.

NOMINAL PIPE SIZE (MM)	PRODUCT CODE	TRAY PROFILE (MM)	PENETRATION HOLE SIZE (MM)	MAX FRL	ASSESSMENT#
PVC PLASTIC PIPE					
40	DIFC40	60, 80, 210	72	-/120/120	12424-003
50	DIFC50	60, 80, 210	82	-/120/120	12424-003
65	DIFC65	60, 80, 210	102	-/120/120	12424-003
80	DIFC80	60, 80, 210	112	-/120/120	12424-003
100	DIFC100	60, 80, 210	142	-/120/120	12424-003
150	DIFC150	60, 80, 210	192	-/120/120	12424-003
PVC PLASTIC PIPE - WITH SOCKET					
40	DIFC40	60, 80, 210	72	-/120/120	12424-002
50	DIFC50	60, 80, 210	82	-/120/120	12424-002
65	DIFC65	60, 80, 210	102	-/120/120	12424-002
80	DIFC80	60, 80, 210	112	-/120/120	12424-002
100	DIFC100	60, 80, 210	142	-/120/120	12424-002
HDPE					
50	DIFC50	60, 80, 210	82	-/120/120	12424-003
100	DIFC100	60, 80, 210	143	-/120/120	12424-003
150	DIFC150	60, 80, 210	192	-/120/120	12424-003
D-BLUE PP-MD					
50	DIFC50	60, 80, 210	82	-/120/120	12424-003
100	DIFC100	60, 80, 210	142	-/120/120	12424-003

DIFC COMPOSITE FLOOR WASTE RESULTS:

NOMINAL PIPE SIZE (MM)	PRODUCT CODE	TRAY PROFILE (MM)	PENETRATION HOLE SIZE (MM)	MAX FRL	ASSESSMENT#
PVC - WITH SOCKET					
80	DIFC80	60, 80, 210	112	-/120/120	12424-003
PVC - FIRE RATED FLOOR WASTE					
100	DIFC100	60, 80, 210	142	-/120/120	12424-002
HDPE					
100	DIFC100	60, 80, 210	143	-/120/120	12424-002

COMPOSITE FLOOR TRAY PROFILES



ComFlor 60 - FTC 728:

70/130 - Tested on a composite concrete floor with 70mm minimum thickness and 130mm maximum thickness. Profile change of 60mm.

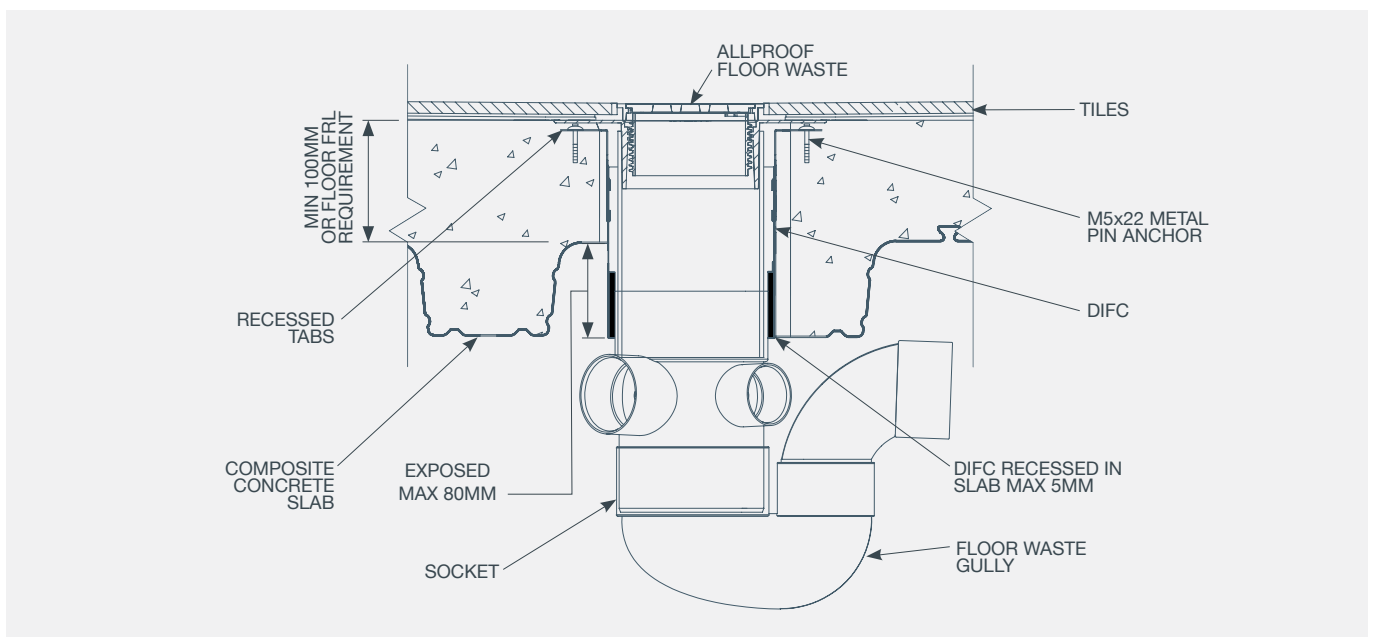
ComFlor 80 - FTC 6341:

100/180 - Tested on a composite concrete floor with 100mm minimum thickness and 180mm maximum thickness. Profile change of 80mm.

ComFlor 210 - FTC 11267:

70/280 - Tested on a composite concrete floor with 70mm minimum thickness and 280mm maximum thickness. Profile change of 210mm.

COMPOSITE FLOOR WASTE INSTALLATION DETAILS:



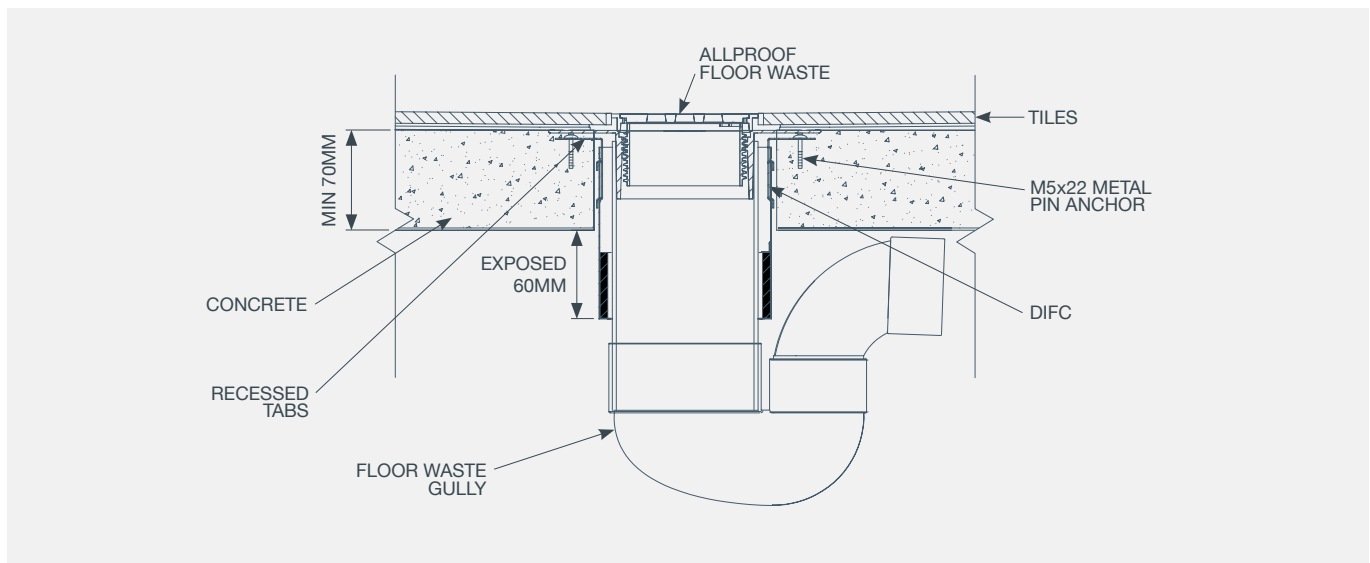
DIFC FLAT SLAB TEST RESULTS:

NOMINAL PIPE SIZE (MM)	SLAB DEPTH (MM)	NOMINAL PIPE WALL THICKNESS (MM)	PRODUCT CODE	PENETRATION HOLE SIZE (MM)	FLOOR FRL	FTC#
D-BLUE PP-MD						
50	70	1.8	DIFC50	82	-/90/60	6017
75	70	2.3	DIFC65	112	-/90/45	6017
110	70	3.4	DIFC100	142	-/90/60	6017
150	70	4.9	DIFC150	192	-/90/60	6017
PP-R PLASTIC PIPE (SDR 11)						
32	70	2.9	DIFC32	57	-/90/60	6017
40	70	3.7	DIFC40	72	-/90/60	6017
110	70	10	DIFC100	142	-/45/60	6017
125	70	11.4	DIFC125	162	-/45/45	6017
PP-R PLASTIC PIPE (SDR 9)						
32	70	4.1	DIFC32	57	-/90/60	6017
40	70	3.7	DIFC40	72	-/90/60	6017
110	70	10	DIFC100	142	-/90/60	6017
125	70	11.4	DIFC125	162	-/90/60	6017

DIFC FLOOR WASTE FLAT SLAB TEST RESULTS:

NOMINAL PIPE SIZE (MM)	SLAB DEPTH (MM)	NOMINAL PIPE WALL THICKNESS (MM)	FIRE PROTECTION PRODUCT	SOCKET	PENETRATION HOLE SIZE (MM)	FLOOR FRL	FTC#
PVC PLASTIC PIPE							
80	70	2.9	DIFC80	No	112	-/120/120	10471
100	70	3.2	DIFC100	No	143	-/120/90	10471

FLAT SLAB FLOOR WASTE INSTALLATION DETAILS:



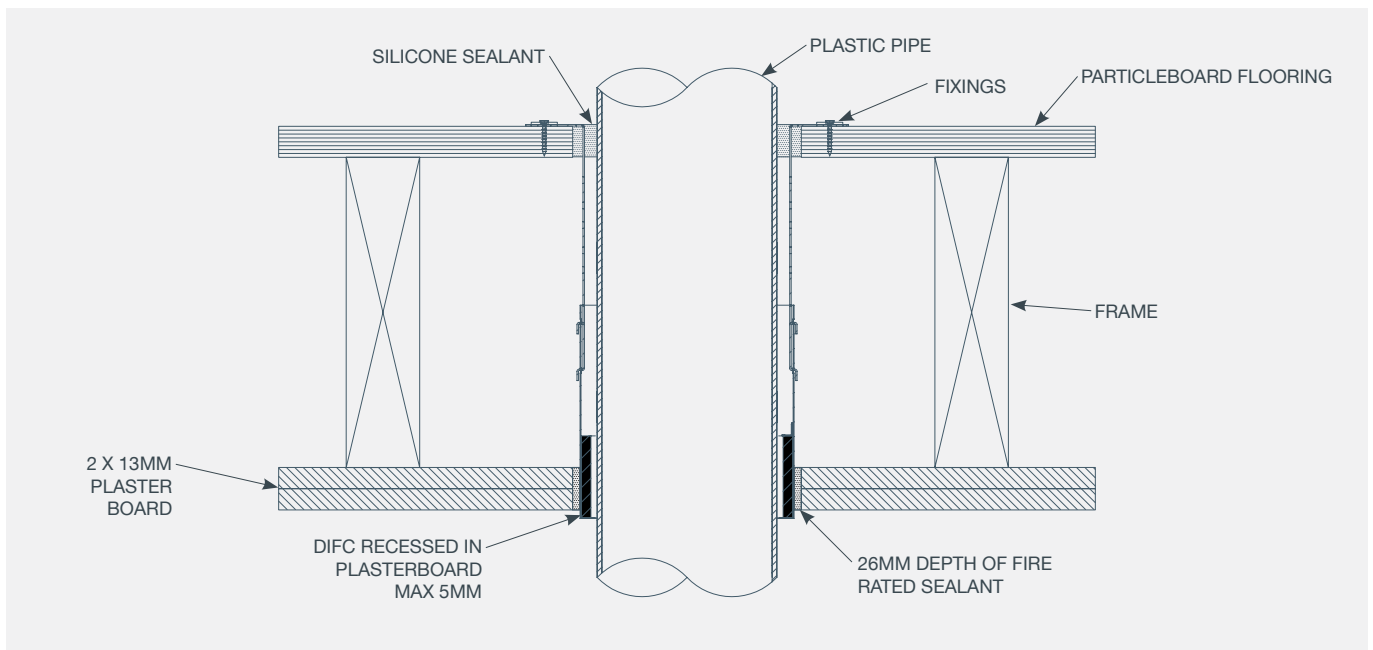
2 X 13MM PLASTERBOARD CEILING TEST RESULTS:

NOMINAL PIPE SIZE (MM)	NOMINAL PIPE WALL THICKNESS (MM)	PRODUCT CODE	PENETRATION HOLE SIZE (MM)	PLASTERBOARD WALL FRL	FTC#
PVC PLASTIC PIPE					
40	2	DIFC40	78	-/90/90	190268.1
50	2.5	DIFC50	88	-/90/90	190268.1
100	3.5	DIFC100	140	-/90/90	190268.1

Fixing: 6G x 32mm Plasterboard screws

Tested using a 190mm deep timber framing with two layers of 13mm fire rated plasterboard on the exposed side of the frame and 19mm particleboard flooring on the unexposed side of the frame. A total floor-ceiling thickness of 235mm. DIFCs fixed using 6Gx32mm plasterboard screws with M6x16 washers into the particleboard flooring on the unexposed side - not fixed into framing or studs. DIFCs extended 5mm from face of the ceiling on the exposed side. Intumescent sealant is applied in the space between the DIFC and plasterboard at a depth of 26mm on the exposed face and silicone sealant between the pipe and particleboard flooring on the unexposed face.

PLASTERBOARD CEILING INSTALLATION DETAILS:



DIFC COLLAR DIMENSIONS:

CODE	OUTER DIAMETER (A)	INNER DIAMETER (B)	CYLINDER LENGTH (C)	MIN - MAX DEPTH (D)
FLOOR DEPTHS UPTO 210MM				
DIFC32 X210	48	35	130	130 - 210
DIFC40 X210	66	53	130	130 - 210
DIFC50 X210	79	66	130	130 - 210
DIFC65 X210	92	78	130	130 - 210
DIFC80 X210	106	92	130	130 - 210
DIFC100 X210	131	118	130	130 - 210
DIFC125 X210	154	133	130	130 - 210
DIFC150 X210	187	161	130	130 - 210
FLOOR DEPTHS UPTO 300MM				
DIFC32 X300	48	35	130	130 - 300
DIFC40 X300	66	53	130	130 - 300
DIFC50 X300	79	66	130	130 - 300
DIFC65 X300	79	78	130	130 - 300
DIFC80 X300	106	92	130	130 - 300
DIFC100 X300	131	118	130	130 - 300
DIFC125 X300	154	133	130	130 - 300
DIFC150 X300	187	161	130	130 - 300

