

Isover Protect Collar

Fire stopping & sealing

Installation Instructions

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General Guide

Isover Protect Collars are designed to maintain the fire resistance of fire rated walls and floors where these are breached by service penetrations, and may be used in drywalls, timber, masonry or concrete walls and floors. The steel shell contains a graphite based reactive material which reacts when exposed to heat from fire closing the openings left by the softening combustible material.

Minimum separations and limitations: Services within the Isover Protect Collar systems do not require a minimum separation, and only requires sufficient space or separation to securely fit the collars onto the substrate. For larger apertures other than described in these installation instructions, Isover Protect Coated Board or Isover Protect Mortar with Isover Protect Pipe Wrap should be used.

Supporting constructions: Flexible walls must have a minimum thickness of 75mm and comprise steel studs or timber studs*) lined on both faces with minimum 1 layer of 12.5mm thick boards. Timber walls must have a minimum thickness of 100mm and comprise solid wood or cross-laminated timber. Rigid walls must have a minimum thickness of 75mm and comprise concrete, aerated concrete or masonry, with a minimum density of 350 kg/m³ (650 kg/m³ in rigid wall details). Rigid floors must have a minimum thickness of 150mm (except composite floors) and comprise aerated concrete or concrete with a minimum density of 650 kg/m³. Timber floors must have a minimum thickness of 150mm and comprise solid wood or cross-laminated timber. The supporting construction must be classified in accordance with EN 13501-2 for the required fire resistance period. Services in floors should be supported at maximum 500mm from the top face. Services in walls should be supported at maximum 300mm from both faces of the wall.

Services: Pipes may be used in all angles between 90° and 45° in all directions with maximum diameter of 50mm, combined with oversized collars with maximum size of 160mm. For guidance on different types of plastic pipes, please refer to the Technical Data Sheet.

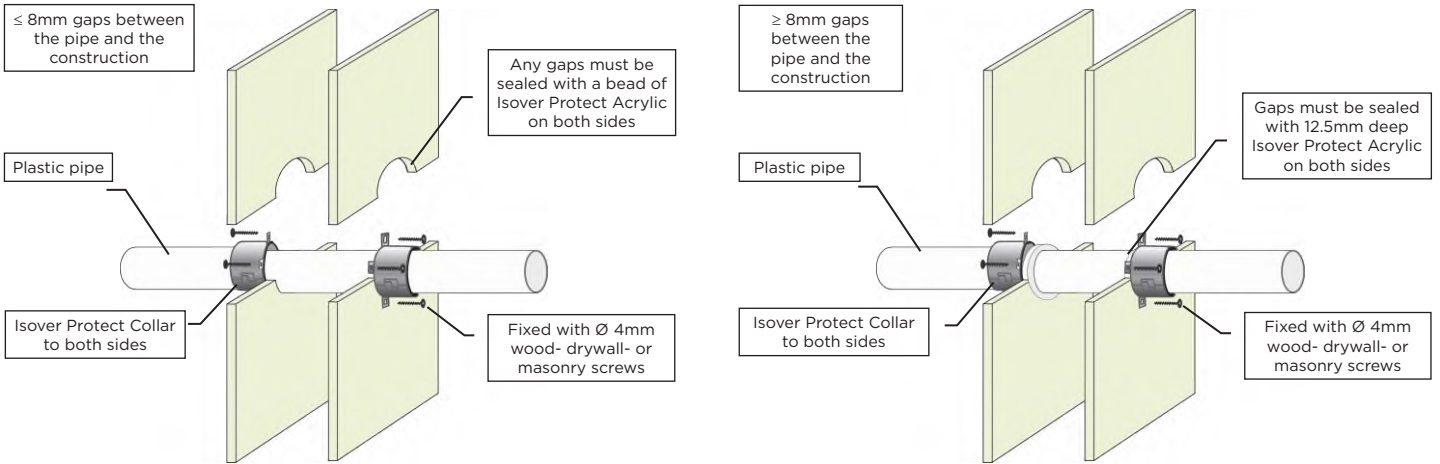
*) Timber studs: no part of the penetration seal may be closer than 100mm to a stud, and minimum 100mm of insulation of class A1 or A2 according to EN 13501-1 must be provided within the cavity between the penetration seal and the stud.

Installation

1. For fire sealing service penetrations, installation must be in accordance to the detailed drawings.
2. Where pipes are placed against a wall or a floor, half a collar shell of the double diameter than the pipe can be used. The half collar shell must be placed towards the surface of the wall or floor, and the maximum allowed pipe diameter is 160 mm, with a maximum collar size of 400 mm.
3. In places where it is impossible to use screws, it is allowed to use screws on one half of a collar shell, with Isover Protect Adhesive fixing the other half, with a maximum allowed collar size of 200 mm. The half of a collar shell which locks the other half in place, should be the half where screws are used.
4. Before fitting the collar ensure that any gaps between the service penetrations and the separating element are sealed. If Isover Protect Acrylic is required, ensure that the surface of all service penetrations and surrounding construction is free from all loose contaminants, dust and grease. Where a backing or plug material is described, this can be replaced with Isover Protect Acrylic if the depth is the same or greater.
5. Choose collars which have the closest diameter to the aperture size (and not necessary the diameter of the services), and make sure the collars are installed wholly against the surface of the construction, and not against any seal surrounding the services. On site where the aperture size is greater than the service diameter, an oversized collar can be used. If not specified in the detailed drawings, in general, any gaps between a service penetration and a construction should not exceed 55 mm width.
6. Place a collar around the service penetrations and ensure that the collar shell and fixing lugs are positioned tightly to the surface of the wall, or the floor, so that the anchors/fixings can be inserted fully. Where the surface is uneven, apply a sealing bead of Isover Protect Acrylic between the wall/floor and the collar shell.
7. Attach the collar with steel screws, anchors or bolts that are suitable for the substrate that the collar will be fitted to. These are described in the detailed drawings. For drywalls use drywall or wood screws with a length suitable for the number of boards that form the wall. For concrete or masonry walls and floors, use minimum 40 mm long masonry screws or expansion bolts.

PVC & PE PLASTIC PIPES FIRE RESISTANCE EI 30 - 60

≥ 75MM DRYWALLS, MASONRY OR CONCRETE WALLS



PVC Pipes (PVC-U & PVC-C)

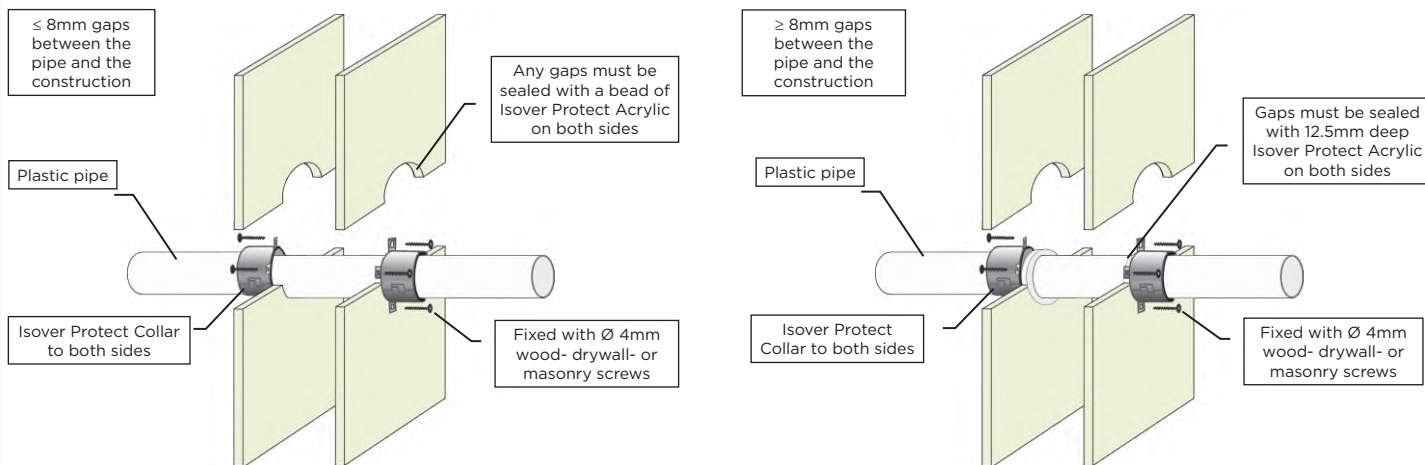
Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	2.4 - 4.6	30	EI 30 (E 60)	EI 30 (E 60)	EI 30 (E 60)	EI 30 (E 60)
40	2.4 - 4.6	30	EI 30 (E 60)	EI 30 (E 60)	EI 30 (E 60)	EI 30 (E 60)
50	2.4 - 4.6	30	EI 30 (E 60)	EI 30 (E 60)	EI 30 (E 60)	EI 30 (E 60)
55	2.4 - 4.8	30	EI 30 (E 60)	EI 30 (E 60)	-	-
63	2.5 - 5.0	30	EI 30 (E 60)	EI 30 (E 60)	-	-
75	2.5 - 5.4	30	EI 30 (E 60)	EI 30 (E 60)	-	-
82	2.6 - 5.6	30	EI 30 (E 60)	EI 30 (E 60)	-	-
90	2.6 - 5.9	30	EI 30 (E 60)	EI 30 (E 60)	-	-
110	2.7 - 6.6	30	EI 45 (E 60)	EI 45 (E 60)	-	-
125	2.9 - 7.4	60	EI 45 (E 60)	EI 45 (E 60)	-	-
140	3.0 - 8.3	60	EI 45 (E 60)	EI 45 (E 60)	-	-
160	3.2 - 9.5	60	EI 45 (E 60)	EI 45 (E 60)	-	-

PE, ABS & SAN+PVC Pipes (incl. PE-LD, PE-MD, PE-HD, PE-X and similar to EN 1519-1, EN 12201-2 or EN 12666-1)

Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	3.0 - 4.6	30	EI 30 (E 60)	EI 30 (E 60)	-	-
40	3.0 - 4.6	30	EI 30 (E 60)	EI 30 (E 60)	-	-
50	3.0 - 4.6	30	EI 30 (E 60)	EI 30 (E 60)	-	-
55	3.0 - 5.0	30	EI 30 (E 60)	EI 30 (E 60)	-	-
63	3.1 - 5.8	30	EI 30 (E 60)	EI 30 (E 60)	-	-
75	3.2 - 6.8	30	EI 30 (E 60)	EI 30 (E 60)	-	-
82	3.2 - 7.5	30	EI 30 (E 60)	EI 30 (E 60)	-	-
90	3.3 - 8.2	30	EI 30 (E 60)	EI 30 (E 60)	-	-
110	3.4 - 10.0	30	EI 60 (E 60)	EI 60 (E 60)	-	-
125	4.2 - 9.8	60	EI 45 (E 60)	EI 45 (E 60)	-	-
140	5.1 - 9.6	60	EI 45 (E 60)	EI 45 (E 60)	-	-
160	6.2 - 9.5	60	EI 45 (E 60)	EI 45 (E 60)	-	-

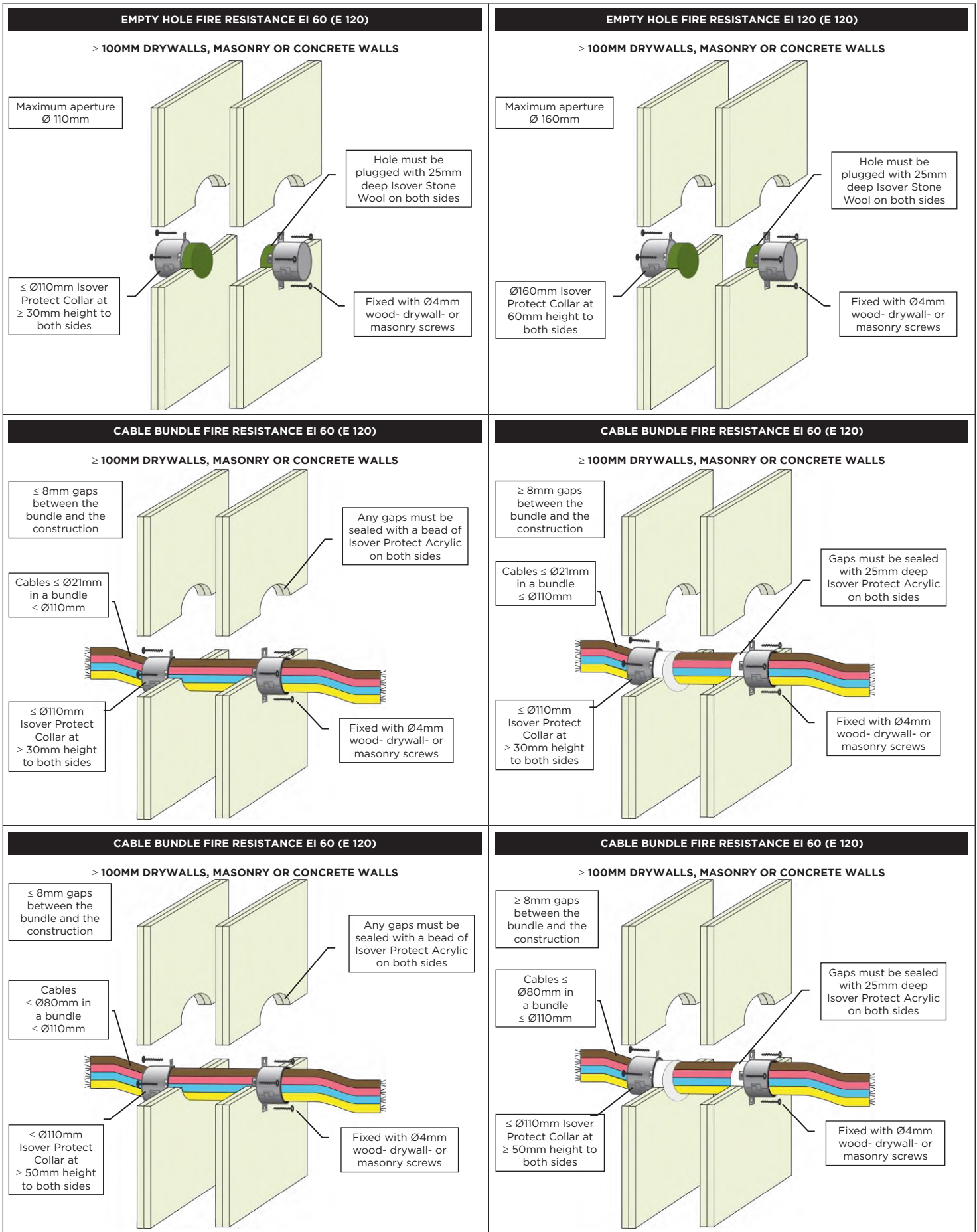
PVC & PE PLASTIC PIPES FIRE RESISTANCE EI 30 - 60

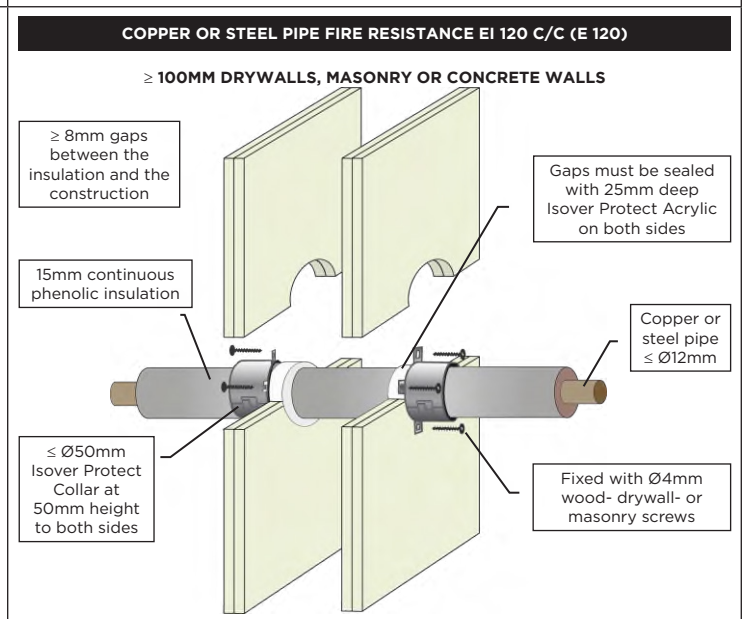
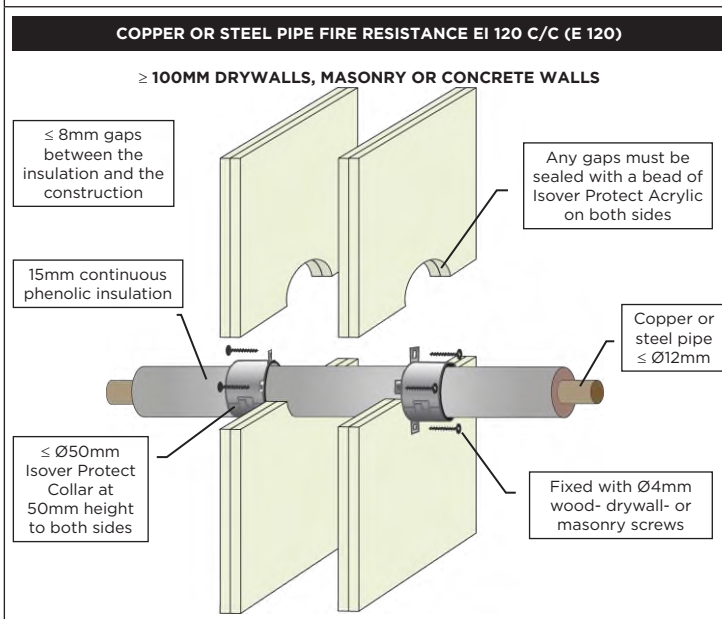
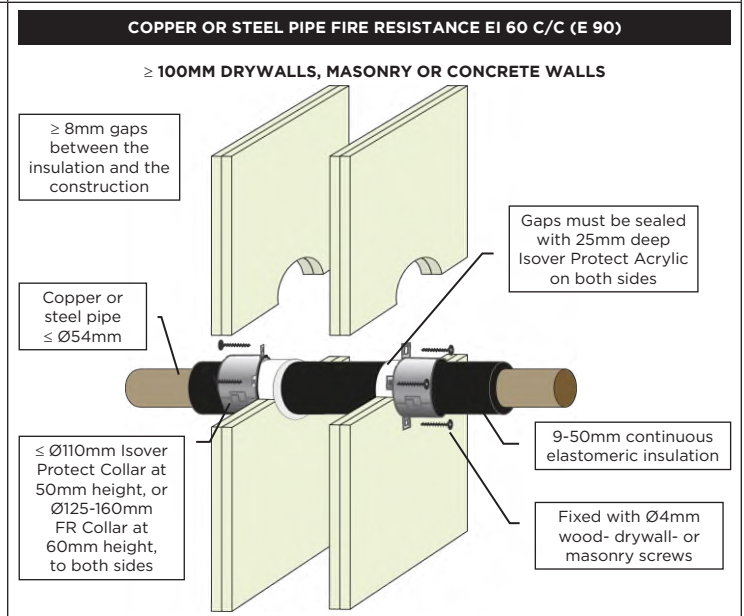
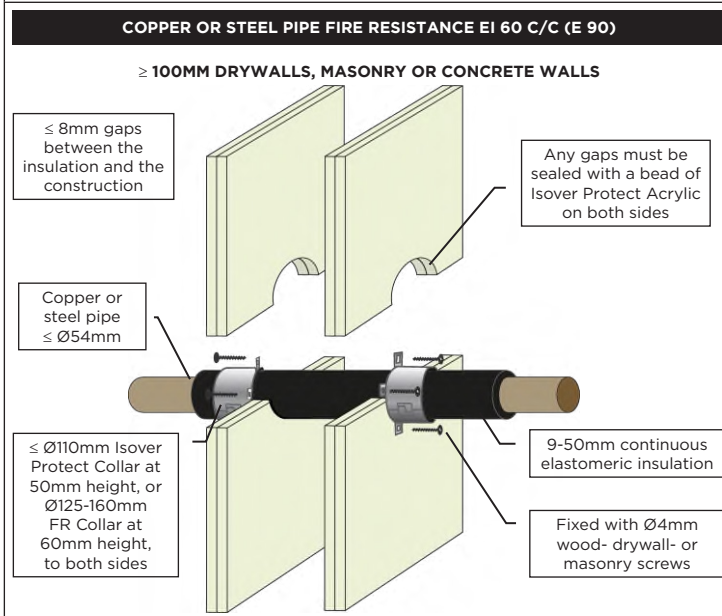
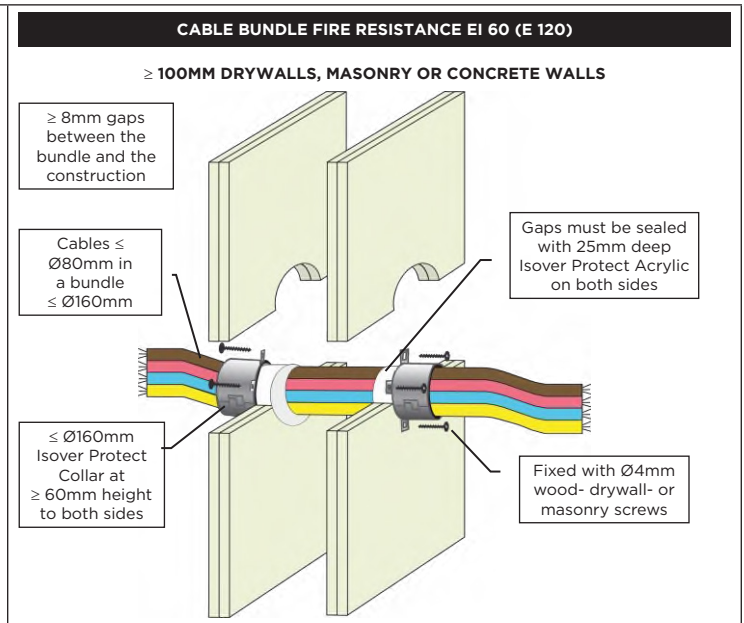
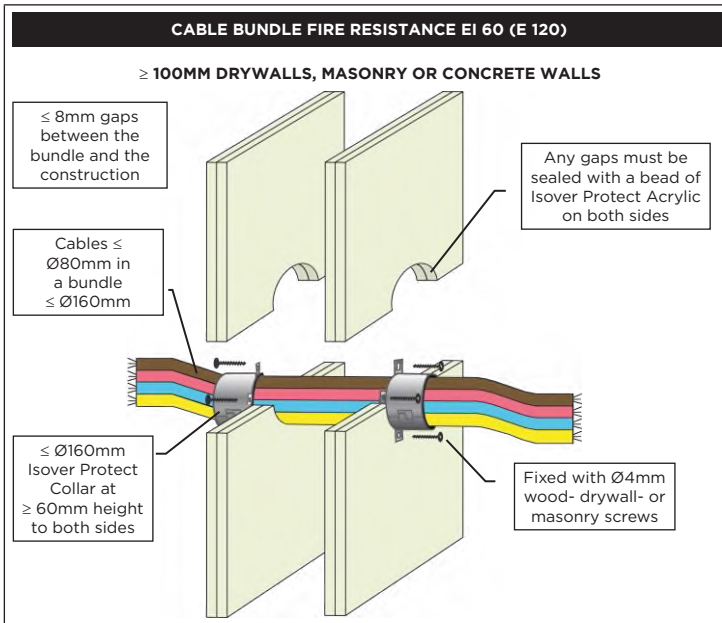
≥ 75MM DRYWALLS, MASONRY OR CONCRETE WALLS

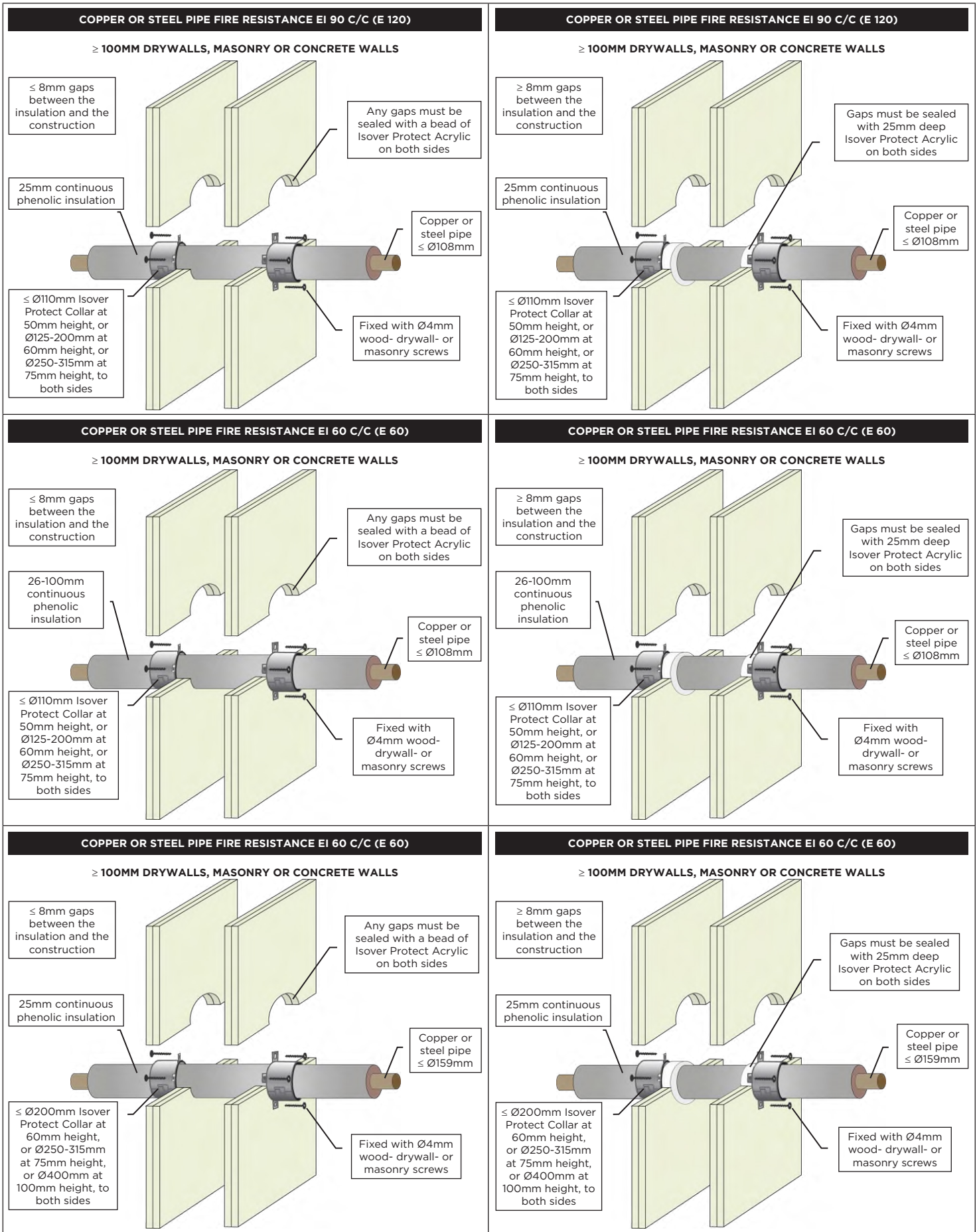


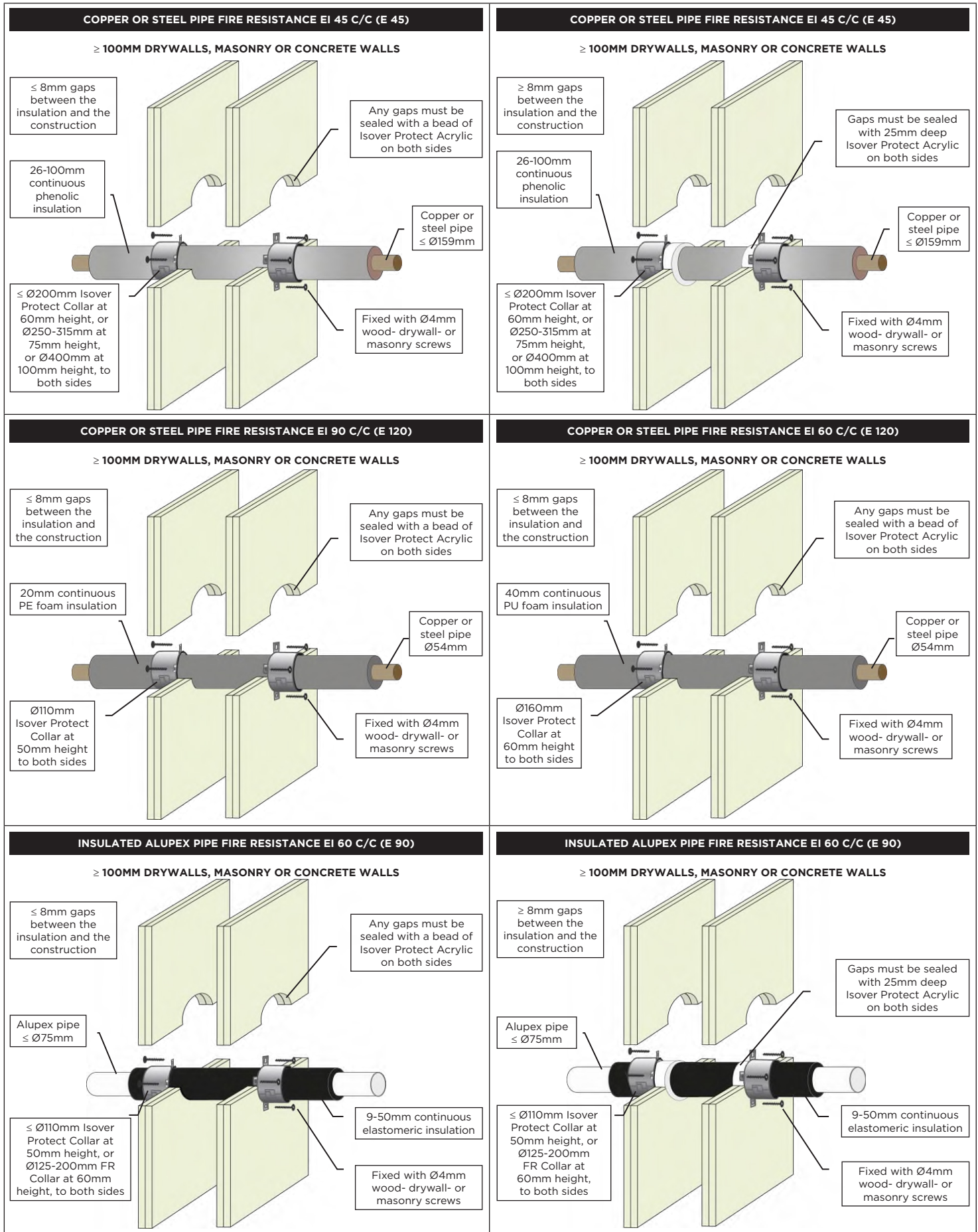
PP Pipes (incl. PP-MV, PP-H, PP-R and similar to EN 1451-1 or DIN 8077/8078)

Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	2.0 - 4.6	30	EI 30 (E 60)	EI 30 (E 60)	EI 30 (E 60)	EI 30 (E 60)
40	2.0 - 4.6	30	EI 30 (E 60)	EI 30 (E 60)	EI 30 (E 60)	EI 30 (E 60)
50	2.0 - 4.6	30	EI 30 (E 60)	EI 30 (E 60)	EI 30 (E 60)	EI 30 (E 60)
55	2.1 - 5.1	30	EI 30 (E 60)	EI 30 (E 60)	-	-
63	2.3 - 5.8	30	EI 30 (E 60)	EI 30 (E 60)	-	-
75	2.6 - 6.9	30	EI 30 (E 60)	EI 30 (E 60)	-	-
82	2.7 - 7.5	30	EI 30 (E 60)	EI 30 (E 60)	-	-
90	2.9 - 8.2	30	EI 30 (E 60)	EI 30 (E 60)	-	-
110	3.4 - 10.0	30	EI 45 (E 60)	EI 45 (E 60)	-	-
125	3.9 - 11.4	60	EI 45 (E 60)	EI 45 (E 60)	-	-
140	4.3 - 12.8	60	EI 45 (E 60)	EI 45 (E 60)	-	-
160	4.9 - 14.6	60	EI 60 (E 60)	EI 60 (E 60)	-	-



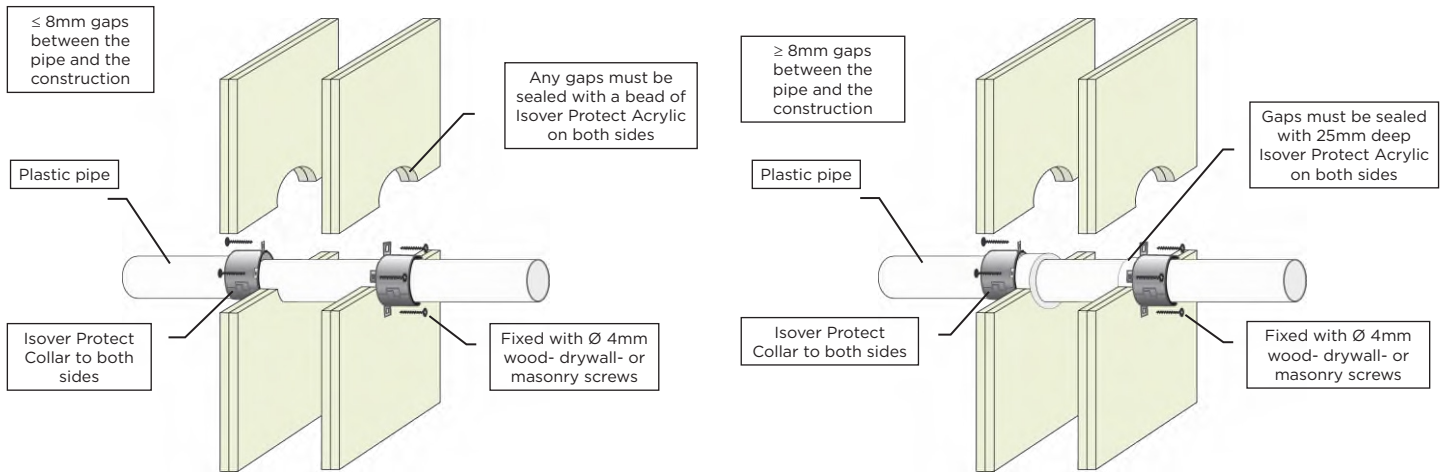






PVC PLASTIC PIPES FIRE RESISTANCE EI 60-90

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



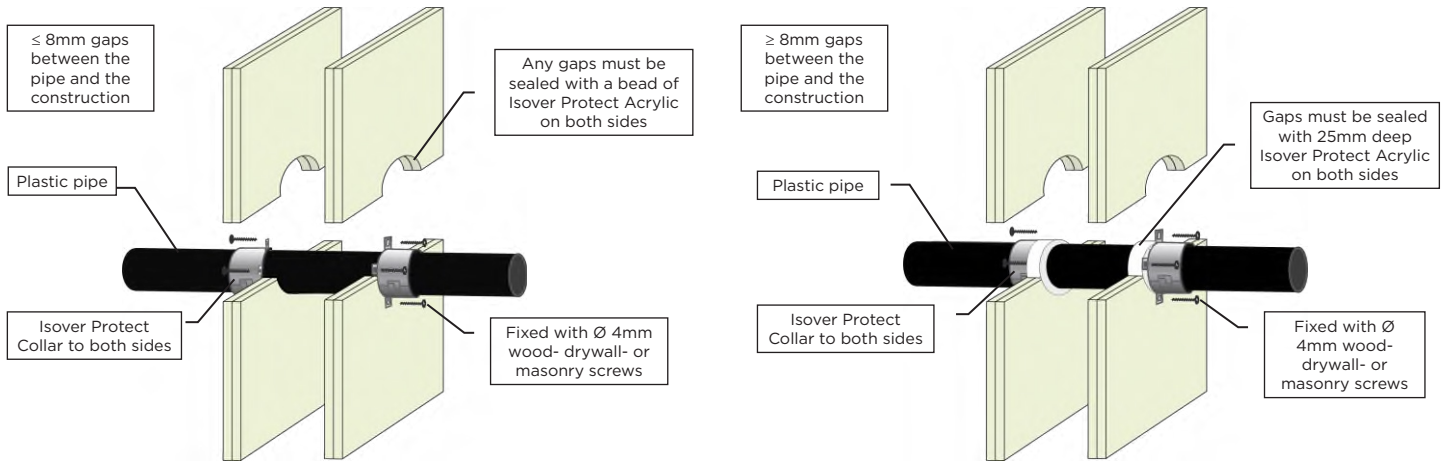
PVC Pipes (PVC-U & PVC-C)

Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	1.2 - 2.3	30	EI 60 (E 90)	EI 60 (E 90)	-	-
32	2.4 - 4.6	30	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
40	1.2 - 2.3	30	EI 60 (E 90)	EI 60 (E 90)	-	-
40	2.4 - 4.6	30	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
50	1.2 - 2.3	30	EI 60 (E 90)	EI 60 (E 90)	-	-
50	2.4 - 4.6	30	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
55	1.3 - 4.7	30	EI 60 (E 60)	EI 60 (E 60)	-	-
55	2.5 - 4.7	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
63	1.5 - 5.0	30	EI 60 (E 60)	EI 60 (E 60)	-	-
63	2.5 - 5.0	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
75	1.8 - 5.4	30	EI 60 (E 60)	EI 60 (E 60)	-	-
75	2.6 - 5.4	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
82	2.0 - 5.6	30	EI 60 (E 60)	EI 60 (E 60)	-	-
82	2.6 - 5.6	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
90	2.2 - 5.9	30	EI 60 (E 60)	EI 60 (E 60)	-	-
90	2.6 - 5.9	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
110	2.7 - 6.6	30	EI 60 (E 60)	EI 60 (E 60)	-	-
110	2.7 - 6.6	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
125	2.9 - 7.4	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
140	3.0 - 8.3	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
160	3.2 - 9.5	50	EI 90 (E 90)	EI 90 (E 90)	-	-
160	3.2 - 9.5	60	EI 90 (E 90)	EI 90 (E 90)	EI 60 (E 60)	EI 60 (E 60)
200	4.9 - 11.9	60	EI 120 (E 120)	EI 120 (E 120)	-	-
315	7.7 - 12.1	75	EI 90 (E 90)	-	-	-
400	9.8 - 11.9	100	EI 90 (E 120)	-	-	-

TECHNICAL DRAWINGS ISOVER PROTECT COLLAR

PE PLASTIC PIPES FIRE RESISTANCE EI 60-90

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



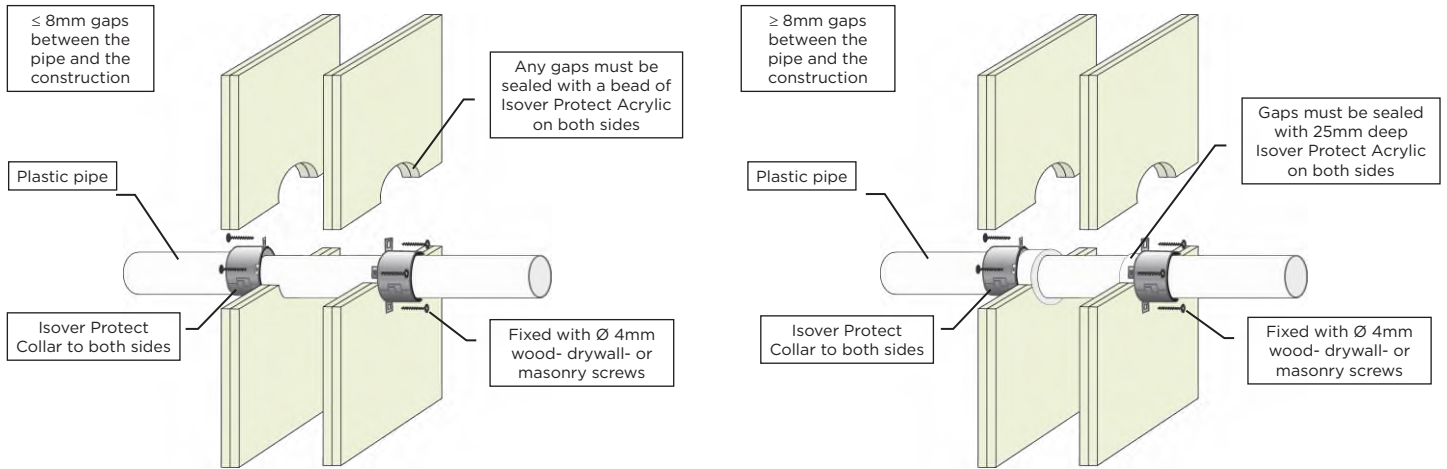
PE, ABS & SAN+PVC Pipes (incl. PE-LD, PE-MD, PE-HD, PE-X and similar to EN 1519-1, EN 12201-2 or EN 12666-1)

Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	3.0 - 5.6	30	EI 60 (E 90)	EI 60 (E 90)	-	-
32	3.0 - 4.6	50	EI 90 (E 120)	EI 90 (E 120)	EI 90 (E 120)	EI 90 (E 120)
40	3.0 - 5.6	30	EI 60 (E 90)	EI 60 (E 90)	-	-
40	3.0 - 4.6	50	EI 90 (E 120)	EI 90 (E 120)	EI 90 (E 120)	EI 90 (E 120)
50	3.0 - 5.6	30	EI 60 (E 90)	EI 60 (E 90)	-	-
50	3.0 - 4.6	50	EI 90 (E 120)	EI 90 (E 120)	EI 90 (E 120)	EI 90 (E 120)
55	3.0 - 6.0	30	EI 60 (E 60)	EI 60 (E 60)	-	-
55	3.1 - 5.0	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
63	3.1 - 6.6	30	EI 60 (E 60)	EI 60 (E 60)	-	-
63	3.1 - 5.7	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
75	3.2 - 7.5	30	EI 60 (E 60)	EI 60 (E 60)	-	-
75	3.2 - 6.8	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
82	3.2 - 8.0	30	EI 60 (E 60)	EI 60 (E 60)	-	-
82	3.2 - 7.4	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
90	3.3 - 8.6	30	EI 60 (E 60)	EI 60 (E 60)	-	-
90	3.3 - 8.1	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
110	3.4 - 10.0	30	EI 60 (E 60)	EI 60 (E 60)	-	-
110	3.4 - 10.0	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
125	4.2 - 9.8	50	EI 60 (E 60)	EI 60 (E 60)	-	-
125	4.0 - 11.5	60	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
140	5.1 - 9.6	50	EI 60 (E 60)	EI 60 (E 60)	-	-
140	4.4 - 12.8	60	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
160	6.2 - 9.5	50	EI 60 (E 60)	EI 60 (E 60)	-	-
160	4.9 - 14.6	60	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)
200	6.2 - 18.2	60	EI 90 (E 120)	EI 90 (E 120)	-	-
400	36.3	100	EI 90 (E 90)	-	-	-

TECHNICAL DRAWINGS ISOVER PROTECT COLLAR

PP PLASTIC PIPES FIRE RESISTANCE EI 60

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS

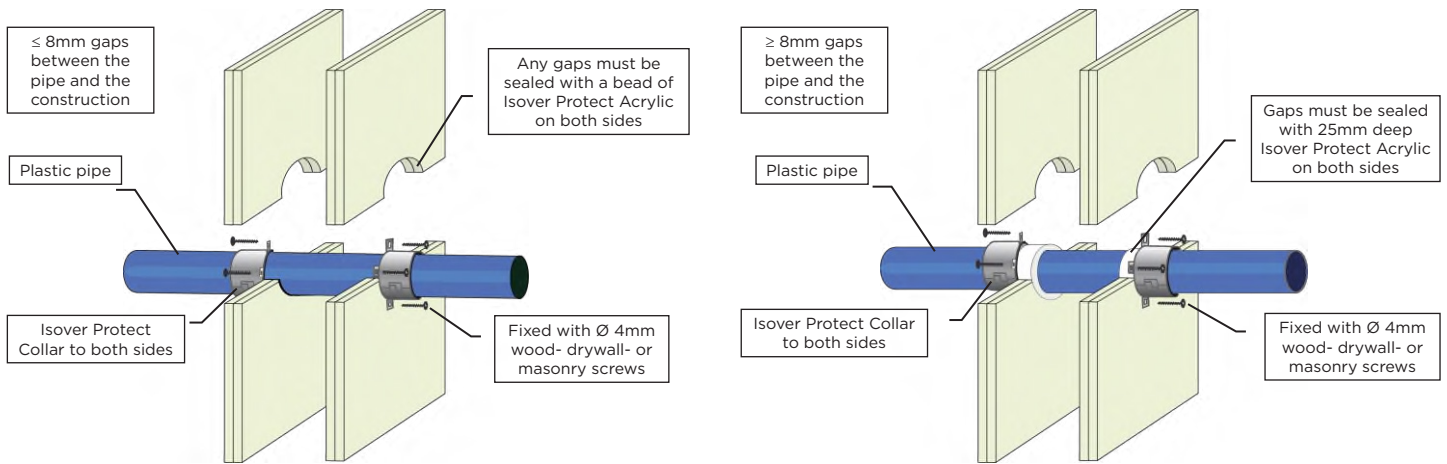


PP Pipes (incl. PP-MV, PP-H, PP-R and similar to EN 1451-1 or DIN 8077/8078)

Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	1.8 - 4.6	30	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
32	4.7 - 5.6	30	EI 60 (E 90)	EI 60 (E 90)	-	-
40	1.8 - 4.6	30	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
40	4.7 - 5.6	30	EI 60 (E 90)	EI 60 (E 90)	-	-
50	1.8 - 4.6	30	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
50	4.7 - 5.6	30	EI 60 (E 90)	EI 60 (E 90)	-	-
55	2.0 - 5.7	30	EI 60 (E 90)	EI 60 (E 90)	-	-
55	2.0 - 4.7	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
55	4.8 - 6.0	50	EI 60 (E 60)	EI 60 (E 60)	-	-
63	2.2 - 5.8	30	EI 60 (E 90)	EI 60 (E 90)	-	-
63	2.2 - 5.0	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
63	5.1 - 6.6	50	EI 60 (E 60)	EI 60 (E 60)	-	-
75	2.5 - 5.9	30	EI 60 (E 90)	EI 60 (E 90)	-	-
75	2.5 - 5.4	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
75	5.5 - 7.6	50	EI 60 (E 60)	EI 60 (E 60)	-	-
82	2.7 - 6.0	30	EI 60 (E 90)	EI 60 (E 90)	-	-
82	2.7 - 5.6	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
82	5.7 - 8.2	50	EI 60 (E 60)	EI 60 (E 60)	-	-
90	2.9 - 6.1	30	EI 60 (E 90)	EI 60 (E 90)	-	-
90	2.9 - 5.9	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
90	6.0 - 8.9	50	EI 60 (E 60)	EI 60 (E 60)	-	-
110	3.4 - 6.3	30	EI 60 (E 90)	EI 60 (E 90)	-	-
110	3.4 - 6.6	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
110	6.7 - 10.5	50	EI 60 (E 60)	EI 60 (E 60)	-	-
125	3.8 - 11.7	50	EI 60 (E 60)	EI 60 (E 60)	-	-
125	3.9 - 9.0	60	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
140	4.2 - 12.9	50	EI 60 (E 60)	EI 60 (E 60)	-	-
140	4.4 - 11.4	60	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
160	4.9 - 14.6	50	EI 60 (E 60)	EI 60 (E 60)	-	-
160	4.9 - 14.6	60	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
200	4.9 - 18.2	60	EI 90 (E 120)	EI 90 (E 120)	-	-
400	22.7	100	EI 60 (E 60)	-	-	-

COMPOSITE PLASTIC PIPES FIRE RESISTANCE EI 0 - 120

≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS



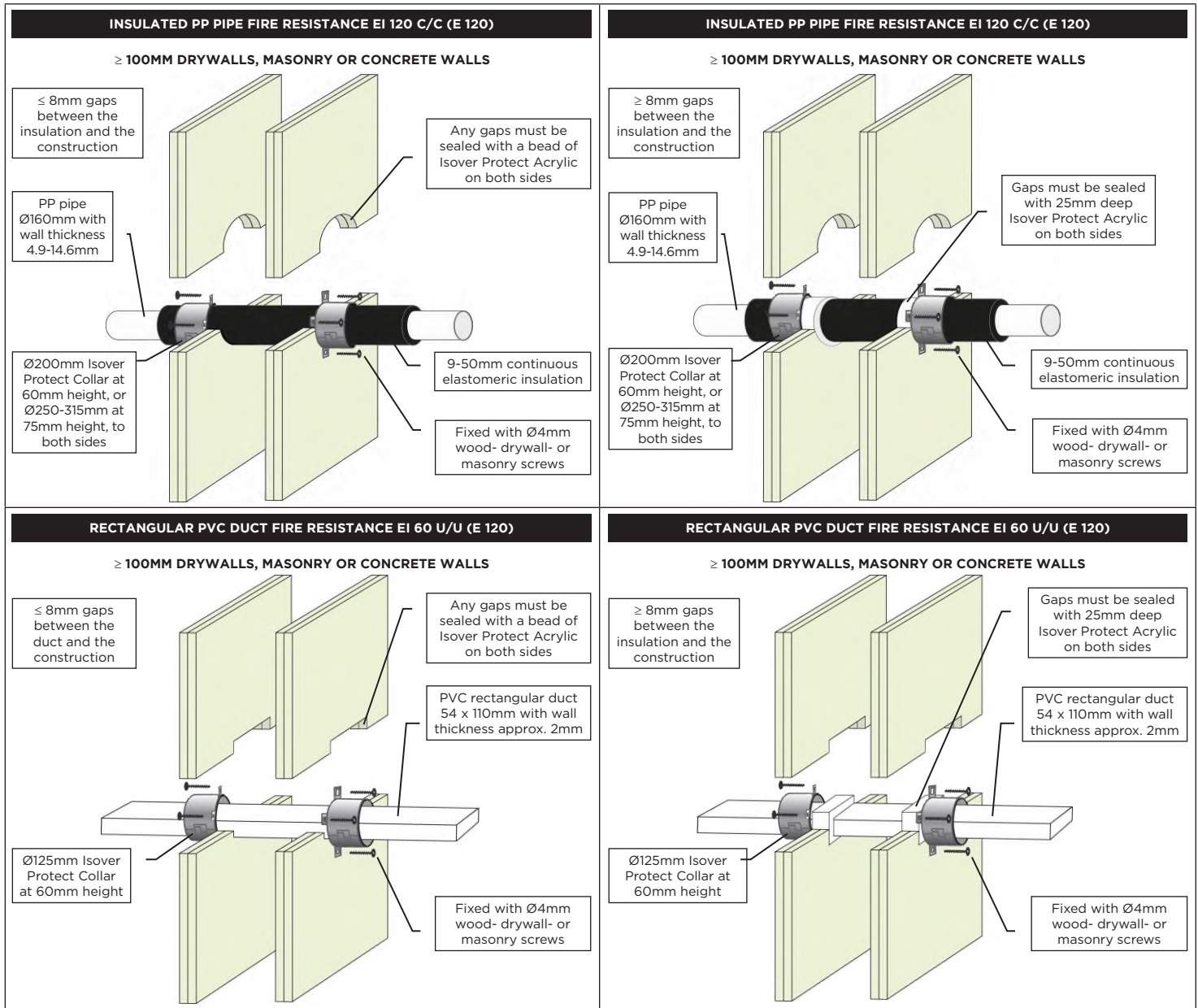
Composite Plastic Pipes						
Pipe & Collar Descriptions			Fire Classifications			
Pipe	Pipe Diameter [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
Aqualtherm Green SDR9	32	30	EI 120 (E 120)	-	-	-
	40 - 50	50	EI 120 (E 120)	-	-	-
	63 - 110	50	EI 60 (E 120)	-	-	-
BluePower	32 - 50	50	EI 90 (E 120)	EI 90 (E 120)	EI 90 (E 120)	EI 90 (E 120)
	75 - 110	50	EI 60 (E 120)	EI 60 (E 120)	EI 60 (E 120)	-
	125	60	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	-
	160	60	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)	-
Geberit Silent-PP	32 - 50	50	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)
	75 - 110	50	EI 60 (E 120)	EI 60 (E 120)	EI 60 (E 120)	EI 60 (E 120)
	160	60	EI 90 (E 90)	EI 90 (E 90)	-	-
Polo-Kal NG pipes	32 - 50	50	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)
	75 - 110	50	EI 90 (E 120)	EI 90 (E 120)	EI 90 (E 120)	EI 90 (E 120)
	125	60	EI 120 (E 120)	EI 120 (E 120)	(E 120)	(E 120)
	160	60	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)
Rehau Raupiano Plus	40 - 50	50	EI 90 (E 120)	EI 90 (E 120)	EI 90 (E 120)	EI 90 (E 120)
	75 - 110	50	EI 60 (E 120)	EI 60 (E 120)	EI 60 (E 120)	EI 60 (E 120)
	125 - 160	60	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)
Uponor Decibel	50 - 110	50	EI 60 (E 120)	EI 60 (E 120)	EI 60 (E 120)	EI 60 (E 120)
Wavin AS+	50	50	EI 90 (E 120)	EI 90 (E 120)	EI 90 (E 120)	EI 90 (E 120)
	75 - 110	50	EI 60 (E 120)	EI 60 (E 120)	-	-
	125 - 160	60	EI 60 (E 120)	EI 60 (E 120)	-	-
	200	60	EI 90 (E 120)	EI 90 (E 120)	-	-
Wavin SiTech	32 - 50	50	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)
	75 - 110	50	EI 60 (E 120)	EI 60 (E 120)	EI 60 (E 120)	EI 60 (E 120)

TECHNICAL DRAWINGS ISOVER PROTECT COLLAR

<p>PLASTIC PIPES & CONDUITS FIRE RESISTANCE EI 90 U/C (E 90)</p> <p>≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS</p> <p>≤ 8mm gaps between the bundle and the construction</p> <p>Fixed with Ø4mm wood-drywall- or masonry screws</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height, or Ø125-160mm Isover Protect Collar at 60mm height, to both sides</p> <p>PVC pipes with wall thickness 1.0-3.7mm, PE pipes 2.0-3.7mm and PP pipes 1.8-3.7mm</p> <p>Any gaps must be sealed with a bead of Isover Protect Acrylic on both sides</p> <p>PVC, PE & PP pipes ≤ Ø40mm, single or in a bundle ≤ Ø160mm, with or without cables ≤ Ø21mm, singles or in bundles</p>	<p>PLASTIC PIPES & CONDUITS FIRE RESISTANCE EI 90 U/C (E 90)</p> <p>≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS</p> <p>≥ 8mm gaps between the bundle and the construction</p> <p>Fixed with Ø4mm wood-drywall- or masonry screws</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height, or Ø125-160mm Isover Protect Collar at 60mm height, to both sides</p> <p>PVC pipes with wall thickness 1.0-3.7mm, PE pipes 2.0-3.7mm and PP pipes 1.8-3.7mm</p> <p>Gaps must be sealed with 25mm deep Isover Protect Acrylic on both sides</p> <p>PVC, PE & PP pipes ≤ Ø40mm, single or in a bundle ≤ Ø160mm, with or without cables ≤ Ø21mm, singles or in bundles</p>
<p>PEX PIPE-IN-PIPES FIRE RESISTANCE EI 90 C/C (E 120)</p> <p>≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS</p> <p>≤ 8mm gaps between the bundle and the construction</p> <p>PEX pipes ≤ Ø25mm in a bundle ≤ Ø55mm</p> <p>≤ Ø55mm Isover Protect Collar at ≥ 30mm height to both sides</p> <p>Any gaps must be sealed with a bead of Isover Protect Acrylic on both sides</p> <p>Fixed with Ø4mm wood- drywall- or masonry screws</p>	<p>PEX PIPE-IN-PIPES FIRE RESISTANCE EI 90 C/C (E 120)</p> <p>≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS</p> <p>≥ 8mm gaps between the bundle and the construction</p> <p>PEX pipes ≤ Ø25mm in a bundle ≤ Ø55mm</p> <p>≤ Ø55mm Isover Protect Collar at ≥ 30mm height to both sides</p> <p>Gaps must be sealed with 25mm deep Isover Protect Acrylic on both sides</p> <p>Fixed with Ø4mm wood- drywall- or masonry screws</p>
<p>PEX PIPE-IN-PIPES FIRE RESISTANCE EI 60 C/C (E 60)</p> <p>≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS</p> <p>≤ 8mm gaps between the bundle and the construction</p> <p>PEX pipes ≤ Ø42mm in a bundle ≤ Ø160mm</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height, or Ø125-160mm Isover Protect Collar at 60mm height, to both sides</p> <p>Any gaps must be sealed with a bead of Isover Protect Acrylic on both sides</p> <p>Fixed with Ø4mm wood- drywall- or masonry screws</p>	<p>PEX PIPE-IN-PIPES FIRE RESISTANCE EI 60 C/C (E 60)</p> <p>≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS</p> <p>≥ 8mm gaps between the bundle and the construction</p> <p>PEX pipes ≤ Ø42mm in a bundle ≤ Ø160mm</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height, or Ø125-160mm Isover Protect Collar at 60mm height, to both sides</p> <p>Gaps must be sealed with 25mm deep Isover Protect Acrylic on both sides</p> <p>Fixed with Ø4mm wood- drywall- or masonry screws</p>

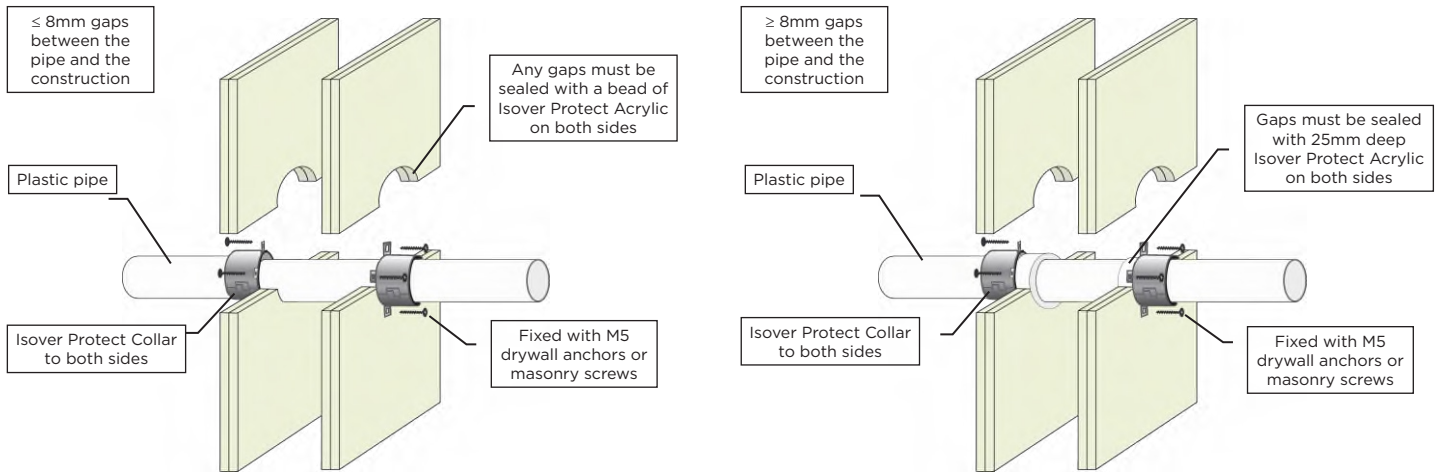
TECHNICAL DRAWINGS ISOVER PROTECT COLLAR

<p>INSULATED PE PIPE FIRE RESISTANCE EI 90 C/C (E 90)</p> <p>≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS</p> <p>≤ 8mm gaps between the insulation and the construction</p> <p>PE pipe ≤ Ø160mm with wall thickness 3.0-9.5mm</p> <p>Any gaps must be sealed with a bead of Isover Protect Acrylic on both sides</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height, or Ø125-200mm at 60mm height, or Ø250-315mm at 75mm height, to both sides</p> <p>9-50mm continuous elastomeric insulation</p> <p>Fixed with Ø4mm wood- drywall- or masonry screws</p>	<p>INSULATED PE PIPE FIRE RESISTANCE EI 90 C/C (E 90)</p> <p>≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS</p> <p>≥ 8mm gaps between the insulation and the construction</p> <p>PE pipe ≤ Ø160mm with wall thickness 3.0-9.5mm</p> <p>Gaps must be sealed with 25mm deep Isover Protect Acrylic on both sides</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height, or Ø125-200mm at 60mm height, or Ø250-315mm at 75mm height, to both sides</p> <p>9-50mm continuous elastomeric insulation</p> <p>Fixed with Ø4mm wood- drywall- or masonry screws</p>
<p>INSULATED PE PIPE FIRE RESISTANCE EI 120 C/C (E 120)</p> <p>≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS</p> <p>≤ 8mm gaps between the insulation and the construction</p> <p>PE pipe Ø160mm with wall thickness 4.9-9.5mm</p> <p>Any gaps must be sealed with a bead of Isover Protect Acrylic on both sides</p> <p>Ø200mm Isover Protect Collar at 60mm height, or Ø250-315mm at 75mm height, to both sides</p> <p>9-50mm continuous elastomeric insulation</p> <p>Fixed with Ø4mm wood- drywall- or masonry screws</p>	<p>INSULATED PE PIPE FIRE RESISTANCE EI 120 C/C (E 120)</p> <p>≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS</p> <p>≥ 8mm gaps between the insulation and the construction</p> <p>PE pipe Ø160mm with wall thickness 4.9-9.5mm</p> <p>Gaps must be sealed with 25mm deep Isover Protect Acrylic on both sides</p> <p>Ø200mm Isover Protect Collar at 60mm height, or Ø250-315mm at 75mm height, to both sides</p> <p>9-50mm continuous elastomeric insulation</p> <p>Fixed with Ø4mm wood- drywall- or masonry screws</p>
<p>INSULATED PP PIPE FIRE RESISTANCE EI 90 C/C (E 90)</p> <p>≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS</p> <p>≤ 8mm gaps between the insulation and the construction</p> <p>PP pipe ≤ Ø160mm with wall thickness 1.8-14.6mm</p> <p>Any gaps must be sealed with a bead of Isover Protect Acrylic on both sides</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height, or Ø125-200mm at 60mm height, or Ø250-315mm at 75mm height, to both sides</p> <p>9-50mm continuous elastomeric insulation</p> <p>Fixed with Ø4mm wood- drywall- or masonry screws</p>	<p>INSULATED PP PIPE FIRE RESISTANCE EI 90 C/C (E 90)</p> <p>≥ 100MM DRYWALLS, MASONRY OR CONCRETE WALLS</p> <p>≥ 8mm gaps between the insulation and the construction</p> <p>PP pipe ≤ Ø160mm with wall thickness 1.8-14.6mm</p> <p>Gaps must be sealed with 25mm deep Isover Protect Acrylic on both sides</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height, or Ø125-200mm at 60mm height, or Ø250-315mm at 75mm height, to both sides</p> <p>9-50mm continuous elastomeric insulation</p> <p>Fixed with Ø4mm wood- drywall- or masonry screws</p>



PVC & PE PLASTIC PIPES FIRE RESISTANCE EI 90 - 120

≥ 120MM DRYWALLS, MASONRY OR CONCRETE WALLS



PVC Pipes (PVC-U & PVC-C)

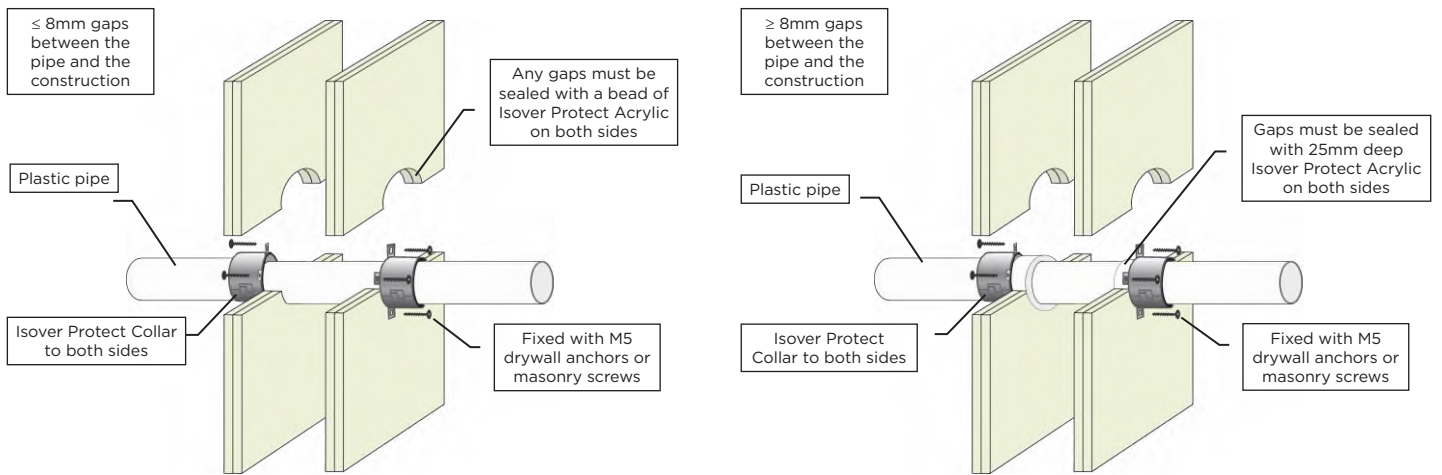
Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	2.4 - 3.7	50	EI 120 (E 120)	-	-	-
40	2.4 - 3.7	50	EI 120 (E 120)	-	-	-
50	2.4 - 3.7	50	EI 120 (E 120)	-	-	-
55	2.4 - 3.9	50	EI 120 (E 120)	-	-	-
63	2.5 - 4.3	50	EI 120 (E 120)	-	-	-
75	2.5 - 4.9	50	EI 120 (E 120)	-	-	-
82	2.6 - 5.2	50	EI 120 (E 120)	-	-	-
90	2.6 - 5.6	50	EI 120 (E 120)	-	-	-
110	2.7 - 6.6	50	EI 120 (E 120)	-	-	-
125	3.1 - 7.5	60	EI 120 (E 120)	-	-	-
140	3.5 - 8.4	60	EI 120 (E 120)	-	-	-
160	4.0 - 9.5	60	EI 120 (E 120)	-	-	-
200	4.9 - 11.9	60	EI 120 (E 120)	EI 120 (E 120)	-	-

PE, ABS & SAN+PVC Pipes (incl. PE-LD, PE-MD, PE-HD, PE-X and similar to EN 1519-1, EN 12201-2 or EN 12666-1)

Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	3.0 - 4.6	50	EI 120 (E 120)	-	-	-
40	3.0 - 4.6	50	EI 120 (E 120)	-	-	-
50	3.0 - 4.6	50	EI 120 (E 120)	-	-	-
55	3.1 - 5.0	50	EI 90 (E 120)	-	-	-
63	3.1 - 5.7	50	EI 90 (E 120)	-	-	-
75	3.2 - 6.8	50	EI 90 (E 120)	-	-	-
82	3.2 - 7.5	50	EI 90 (E 120)	-	-	-
90	3.3 - 8.2	50	EI 90 (E 120)	-	-	-
110	3.4 - 10.0	50	EI 90 (E 120)	-	-	-
110	3.4	50	EI 120 (E 120)	-	-	-
125	3.9 - 5.3	60	EI 120 (E 120)	-	-	-
140	4.3 - 7.1	60	EI 120 (E 120)	-	-	-
160	4.9 - 9.5	60	EI 120 (E 120)	-	-	-

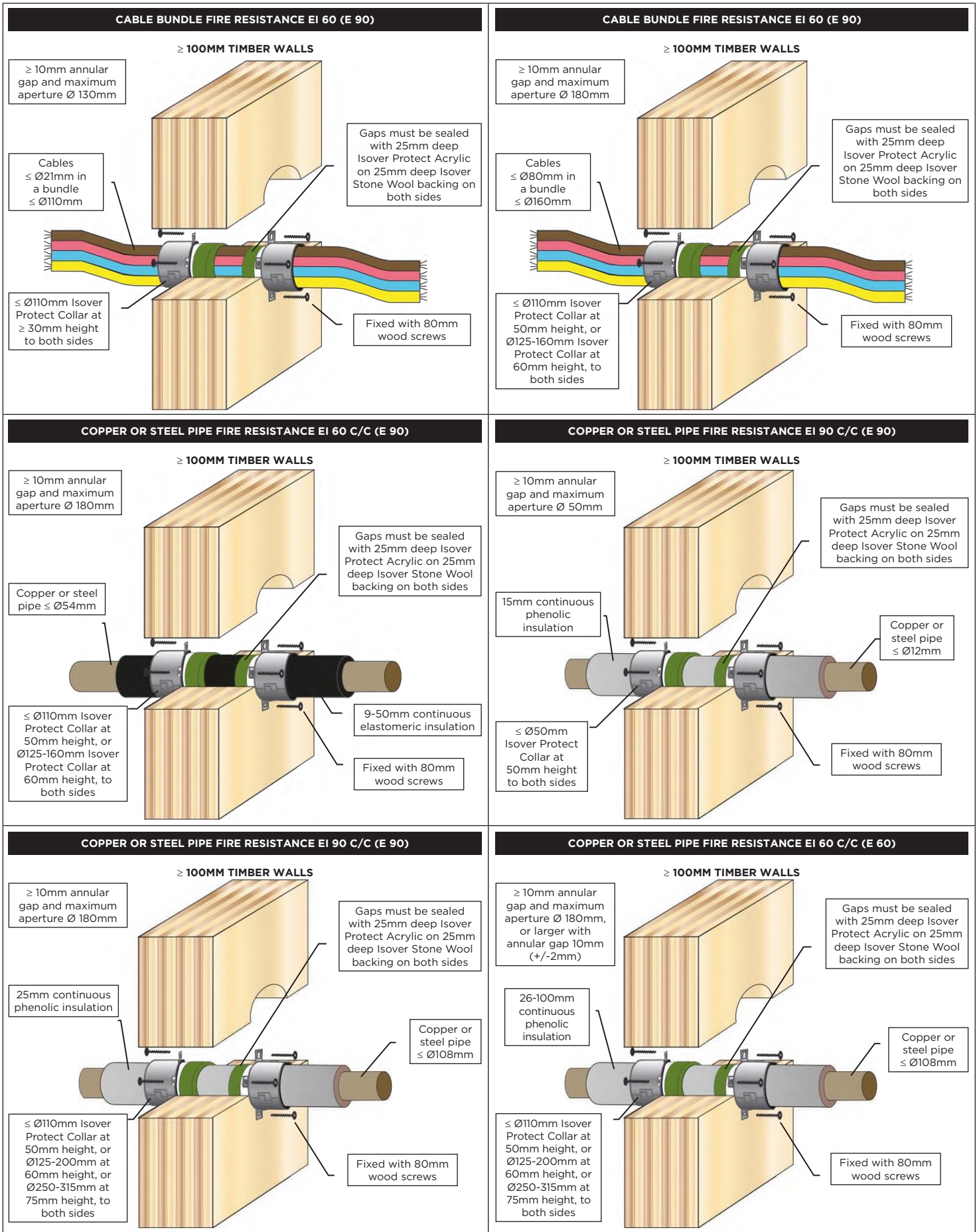
PP PLASTIC PIPES FIRE RESISTANCE EI 90 - 120

≥ 120MM DRYWALLS, MASONRY OR CONCRETE WALLS

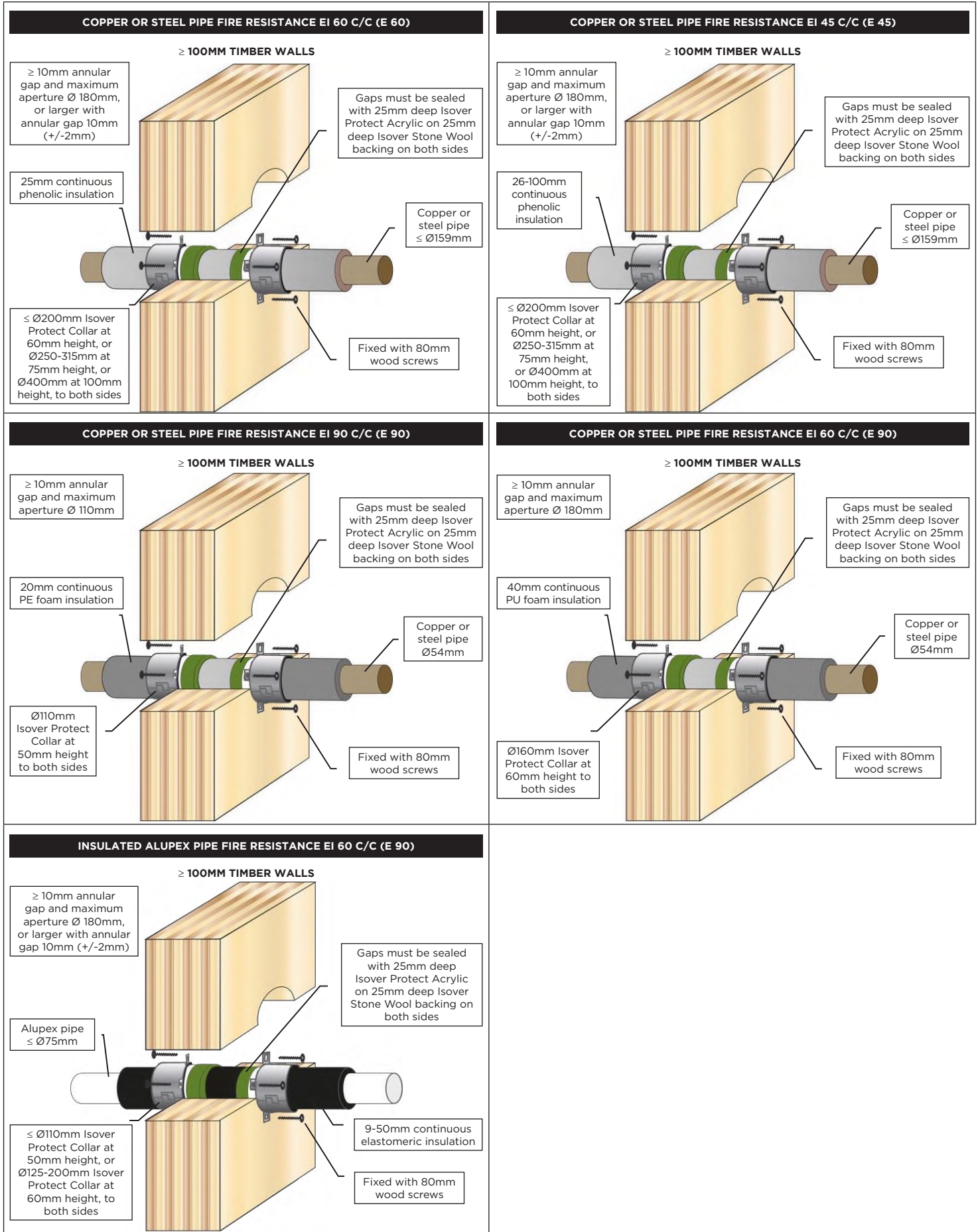


PP Pipes (incl. PP-MV, PP-H, PP-R and similar to EN 1451-1 or DIN 8077/8078)

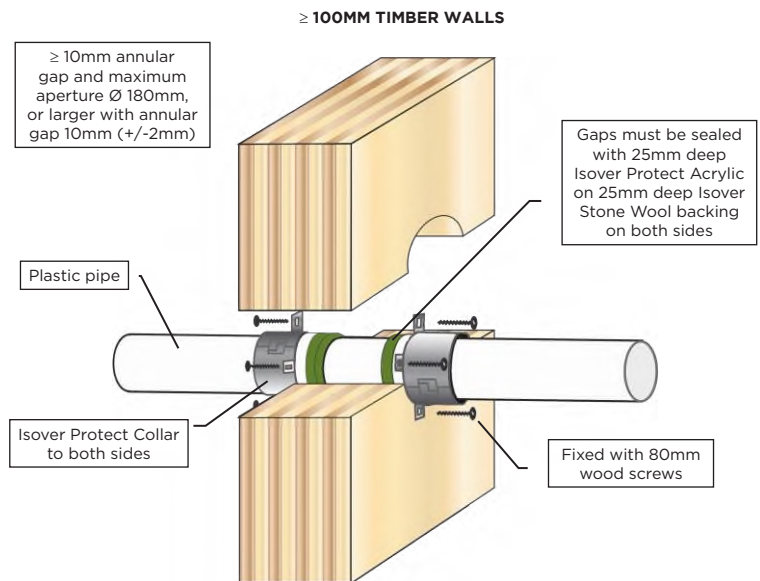
Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	2.9 - 4.6	50	EI 120 (E 120)	-	-	-
40	2.9 - 4.6	50	EI 120 (E 120)	-	-	-
50	2.9 - 4.6	50	EI 120 (E 120)	-	-	-
55	2.9 - 5.0	50	EI 90 (E 120)	-	-	-
63	2.9 - 5.7	50	EI 90 (E 120)	-	-	-
75	2.8 - 6.8	50	EI 90 (E 120)	-	-	-
82	2.8 - 7.5	50	EI 90 (E 120)	-	-	-
90	2.8 - 8.2	50	EI 90 (E 120)	-	-	-
110	2.7 - 10.0	50	EI 90 (E 120)	-	-	-
125	3.3 - 11.3	60	EI 90 (E 120)	-	-	-
140	4.0 - 12.8	60	EI 90 (E 120)	-	-	-
160	4.9 - 14.6	60	EI 120 (E 120)	-	-	-



TECHNICAL DRAWINGS ISOVER PROTECT COLLAR



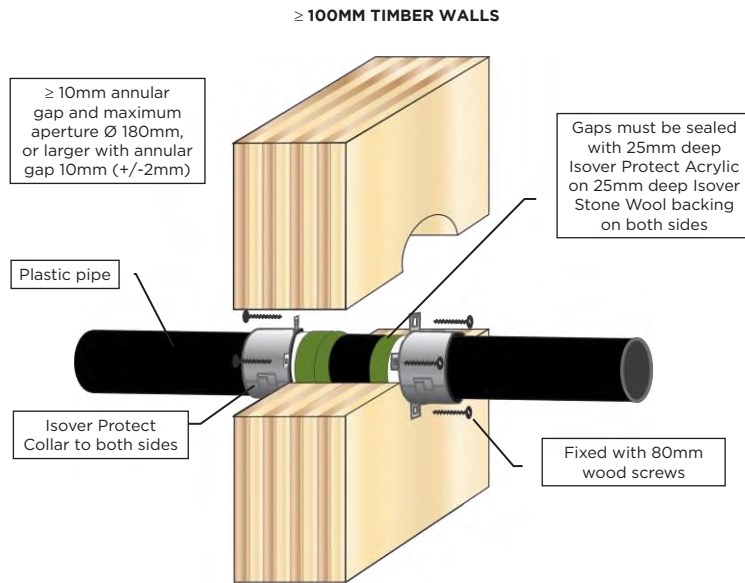
PVC PLASTIC PIPES FIRE RESISTANCE EI 60-90



PVC Pipes (PVC-U & PVC-C)

Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	1.2 - 2.3	30	EI 60 (E 90)	EI 60 (E 90)	-	-
32	2.4 - 4.6	30	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
40	1.2 - 2.3	30	EI 60 (E 90)	EI 60 (E 90)	-	-
40	2.4 - 4.6	30	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
50	1.2 - 2.3	30	EI 60 (E 90)	EI 60 (E 90)	-	-
50	2.4 - 4.6	30	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
55	1.3 - 4.7	30	EI 60 (E 60)	EI 60 (E 60)	-	-
55	2.5 - 4.7	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
63	1.5 - 5.0	30	EI 60 (E 60)	EI 60 (E 60)	-	-
63	2.5 - 5.0	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
75	1.8 - 5.4	30	EI 60 (E 60)	EI 60 (E 60)	-	-
75	2.6 - 5.4	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
82	2.0 - 5.6	30	EI 60 (E 60)	EI 60 (E 60)	-	-
82	2.6 - 5.6	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
90	2.2 - 5.9	30	EI 60 (E 60)	EI 60 (E 60)	-	-
90	2.6 - 5.9	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
110	2.7 - 6.6	30	EI 60 (E 60)	EI 60 (E 60)	-	-
110	2.7 - 6.6	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
125	2.9 - 7.4	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
140	3.0 - 8.3	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
160	3.2 - 9.5	50	EI 90 (E 90)	EI 90 (E 90)	-	-
160	3.2 - 9.5	60	EI 90 (E 90)	EI 90 (E 90)	EI 60 (E 60)	EI 60 (E 60)
200	4.9 - 11.9	60	EI 90 (E 90)	EI 90 (E 90)	-	-
315	7.7 - 12.1	75	EI 90 (E 90)	-	-	-
400	9.8 - 11.9	100	EI 90 (E 90)	-	-	-

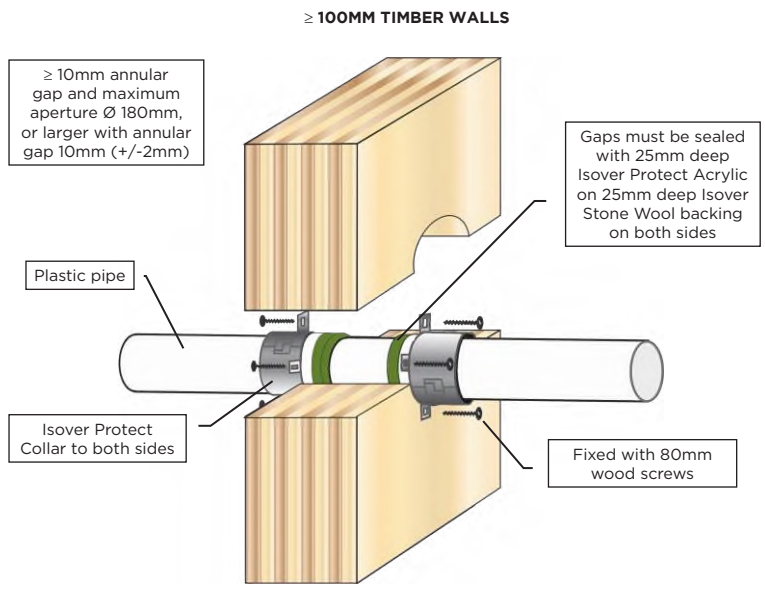
PE PLASTIC PIPES FIRE RESISTANCE EI 60-90



PE, ABS & SAN+PVC Pipes (incl. PE-LD, PE-MD, PE-HD, PE-X and similar to EN 1519-1, EN 12201-2 or EN 12666-1)

Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	3.0 - 5.6	30	EI 60 (E 90)	EI 60 (E 90)	-	-
32	3.0 - 4.6	50	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)
40	3.0 - 5.6	30	EI 60 (E 90)	EI 60 (E 90)	-	-
40	3.0 - 4.6	50	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)
50	3.0 - 5.6	30	EI 60 (E 90)	EI 60 (E 90)	-	-
50	3.0 - 4.6	50	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)
55	3.0 - 6.0	30	EI 60 (E 60)	EI 60 (E 60)	-	-
55	3.1 - 5.0	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
63	3.1 - 6.6	30	EI 60 (E 60)	EI 60 (E 60)	-	-
63	3.1 - 5.7	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
75	3.2 - 7.5	30	EI 60 (E 60)	EI 60 (E 60)	-	-
75	3.2 - 6.8	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
82	3.2 - 8.0	30	EI 60 (E 60)	EI 60 (E 60)	-	-
82	3.2 - 7.4	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
90	3.3 - 8.6	30	EI 60 (E 60)	EI 60 (E 60)	-	-
90	3.3 - 8.1	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
110	3.4 - 10.0	30	EI 60 (E 60)	EI 60 (E 60)	-	-
110	3.4 - 10.0	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
125	4.2 - 9.8	50	EI 60 (E 60)	EI 60 (E 60)	-	-
125	4.0 - 11.5	60	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
140	5.1 - 9.6	50	EI 60 (E 60)	EI 60 (E 60)	-	-
140	4.4 - 12.8	60	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
160	6.2 - 9.5	50	EI 60 (E 60)	EI 60 (E 60)	-	-
160	4.9 - 14.6	60	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)
200	6.2 - 18.2	60	EI 90 (E 90)	EI 90 (E 90)	-	-
400	36.3	100	EI 90 (E 90)	-	-	-

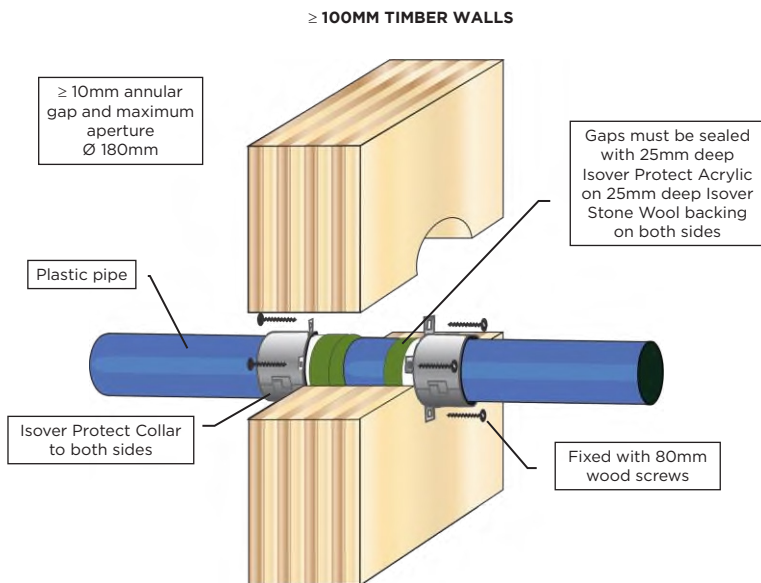
PP PLASTIC PIPES FIRE RESISTANCE EI 60-90



PP Pipes (incl. PP-MV, PP-H, PP-R and similar to EN 1451-1 or DIN 8077/8078)

Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	1.8 - 4.6	30	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
32	4.7 - 5.6	30	EI 60 (E 90)	EI 60 (E 90)	-	-
40	1.8 - 4.6	30	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
40	4.7 - 5.6	30	EI 60 (E 90)	EI 60 (E 90)	-	-
50	1.8 - 4.6	30	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
50	4.7 - 5.6	30	EI 60 (E 90)	EI 60 (E 90)	-	-
55	2.0 - 5.7	30	EI 60 (E 90)	EI 60 (E 90)	-	-
55	2.0 - 4.7	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
55	4.8 - 6.0	50	EI 60 (E 60)	EI 60 (E 60)	-	-
63	2.2 - 5.8	30	EI 60 (E 90)	EI 60 (E 90)	-	-
63	2.2 - 5.0	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
63	5.1 - 6.6	50	EI 60 (E 60)	EI 60 (E 60)	-	-
75	2.5 - 5.9	30	EI 60 (E 90)	EI 60 (E 90)	-	-
75	2.5 - 5.4	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
75	5.5 - 7.6	50	EI 60 (E 60)	EI 60 (E 60)	-	-
82	2.7 - 6.0	30	EI 60 (E 90)	EI 60 (E 90)	-	-
82	2.7 - 5.6	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
82	5.7 - 8.2	50	EI 60 (E 60)	EI 60 (E 60)	-	-
90	2.9 - 6.1	30	EI 60 (E 90)	EI 60 (E 90)	-	-
90	2.9 - 5.9	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
90	6.0 - 8.9	50	EI 60 (E 60)	EI 60 (E 60)	-	-
110	3.4 - 6.3	30	EI 60 (E 90)	EI 60 (E 90)	-	-
110	3.4 - 6.6	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
110	6.7 - 10.5	50	EI 60 (E 60)	EI 60 (E 60)	-	-
125	3.8 - 11.7	50	EI 60 (E 60)	EI 60 (E 60)	-	-
125	3.9 - 9.0	60	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
140	4.2 - 12.9	50	EI 60 (E 60)	EI 60 (E 60)	-	-
140	4.4 - 11.4	60	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
160	4.9 - 14.6	50	EI 60 (E 60)	EI 60 (E 60)	-	-
160	4.9 - 14.6	60	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
200	4.9 - 18.2	60	EI 90 (E 90)	EI 90 (E 90)	-	-
400	22.7	100	EI 60 (E 60)	-	-	-

COMPOSITE PLASTIC PIPES FIRE RESISTANCE EI 0-90



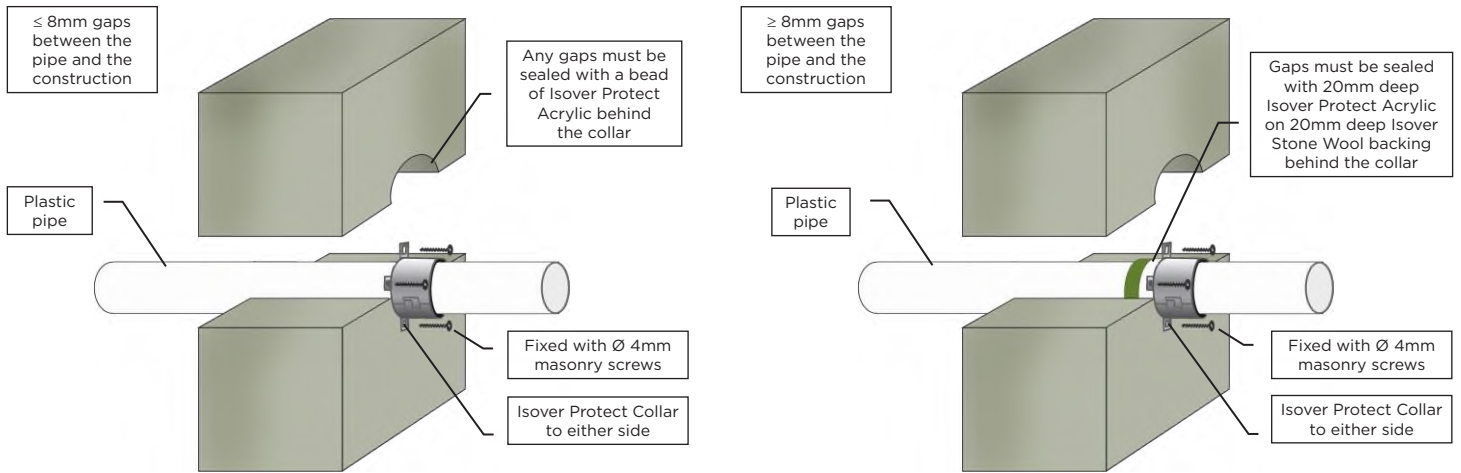
Composite Plastic Pipes						
Pipe & Collar Descriptions			Fire Classifications			
Pipe	Pipe Diameter [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
Aquatherm Green SDR9	32	30	EI 90 (E 90)	-	-	-
	40 - 50	50	EI 90 (E 90)	-	-	-
	63 - 110	50	EI 60 (E 90)	-	-	-
BluePower	32 - 50	50	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)
	75 - 110	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	-
	125	60	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	-
	160	60	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)	-
Geberit Silent-PP	32 - 50	50	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)
	75 - 110	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
	160	60	EI 90 (E 90)	EI 90 (E 90)	-	-
Polo-Kal NG pipes	32 - 50	50	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)
	75 - 110	50	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)
	125	60	EI 90 (E 90)	EI 90 (E 90)	(E 90)	(E 90)
	160	60	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)
Rehau Raupiano Plus	40 - 50	50	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)
	75 - 110	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
	125 - 160	60	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)
Uponor Decibel	50 - 110	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
Wavin AS+	50	50	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)
	75 - 110	50	EI 60 (E 90)	EI 60 (E 90)	-	-
	125 - 160	60	EI 60 (E 90)	EI 60 (E 90)	-	-
	200	60	EI 90 (E 90)	EI 90 (E 90)	-	-
Wavin SiTech	32 - 50	50	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)	EI 90 (E 90)
	75 - 110	50	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)

TECHNICAL DRAWINGS ISOVER PROTECT COLLAR

<p>PLASTIC PIPES & CONDUITS FIRE RESISTANCE EI 90 U/C (E 90)</p> <p>≥ 100MM TIMBER WALLS</p> <p>≥ 10mm annular gap and maximum aperture Ø 180mm</p> <p>Fixed with 80mm wood screws</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height, or Ø125-160mm FR Collar at 60mm height, to both sides</p> <p>PVC pipes with wall thickness 1.0-3.7mm, PE pipes 2.0-3.7mm and PP pipes 1.8-3.7mm</p> <p>Gaps must be sealed with 25mm deep Isover Protect Acrylic on 25mm deep Isover Stone Wool backing on both sides</p> <p>PVC, PE & PP pipes ≤ Ø40mm, single or in a bundle ≤ Ø160mm, with or without cables ≤ Ø21mm, singles or in bundles</p>	<p>PEX PIPE-IN-PIPES FIRE RESISTANCE EI 90 C/C (E 90)</p> <p>≥ 100MM TIMBER WALLS</p> <p>≥ 10mm annular gap and maximum aperture Ø 65mm</p> <p>PEX pipes ≤ Ø25mm in a bundle ≤ Ø55mm</p> <p>Gaps must be sealed with 25mm deep Isover Protect Acrylic on 25mm deep Isover Stone Wool backing on both sides</p> <p>≤ Ø55mm Isover Protect Collar at ≥ 30mm height to both sides</p> <p>Fixed with 80mm wood screws</p>
<p>PEX PIPE-IN-PIPES FIRE RESISTANCE EI 60 C/C (E 60)</p> <p>≥ 100MM TIMBER WALLS</p> <p>≥ 10mm annular gap and maximum aperture Ø 180mm</p> <p>PEX pipes ≤ Ø42mm in a bundle ≤ Ø160mm</p> <p>Gaps must be sealed with 25mm deep Isover Protect Acrylic on 25mm deep Isover Stone Wool backing on both sides</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height, or Ø125-160mm FR Collar at 60mm height, to both sides</p> <p>Fixed with 80mm wood screws</p>	<p>INSULATED PE PIPE FIRE RESISTANCE EI 90 C/C (E 90)</p> <p>≥ 100MM TIMBER WALLS</p> <p>≥ 10mm annular gap and maximum aperture Ø 180mm, or larger with annular gap 10mm (+/-2mm)</p> <p>PE pipe ≤ Ø160mm with wall thickness 3.0-9.5mm</p> <p>Gaps must be sealed with 25mm deep Isover Protect Acrylic on 25mm deep Isover Stone Wool backing on both sides</p> <p>9-50mm continuous elastomeric insulation</p> <p>Fixed with 80mm wood screws</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height, or Ø125-200mm at 60mm height, or Ø250-315mm at 75mm height, to both sides</p>
<p>INSULATED PE PIPE FIRE RESISTANCE EI 90 C/C (E 90)</p> <p>≥ 100MM TIMBER WALLS</p> <p>≥ 10mm annular gap and maximum aperture Ø 180mm, or larger with annular gap 10mm (+/-2mm)</p> <p>PP pipe ≤ Ø160mm with wall thickness 1.8-14.6mm</p> <p>Gaps must be sealed with 25mm deep Isover Protect Acrylic on 25mm deep Isover Stone Wool backing on both sides</p> <p>9-50mm continuous elastomeric insulation</p> <p>Fixed with 80mm wood screws</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height, or Ø125-200mm at 60mm height, or Ø250-315mm at 75mm height, to both sides</p>	<p>RECTANGULAR PVC DUCT FIRE RESISTANCE EI 60 U/U (E 90)</p> <p>≥ 100MM TIMBER WALLS</p> <p>≥ 10mm annular gap and maximum aperture Ø 140mm</p> <p>Gaps must be sealed with 25mm deep Isover Protect Acrylic on 25mm deep Isover Stone Wool backing on both sides</p> <p>PVC rectangular duct 54 x 110mm with wall thickness approx. 2mm</p> <p>Ø125mm Isover Protect Collar at 60mm height</p> <p>Fixed with 80mm wood screws</p>

PVC PLASTIC PIPES FIRE RESISTANCE EI 120-180

≥ 150MM MASONRY OR CONCRETE WALLS



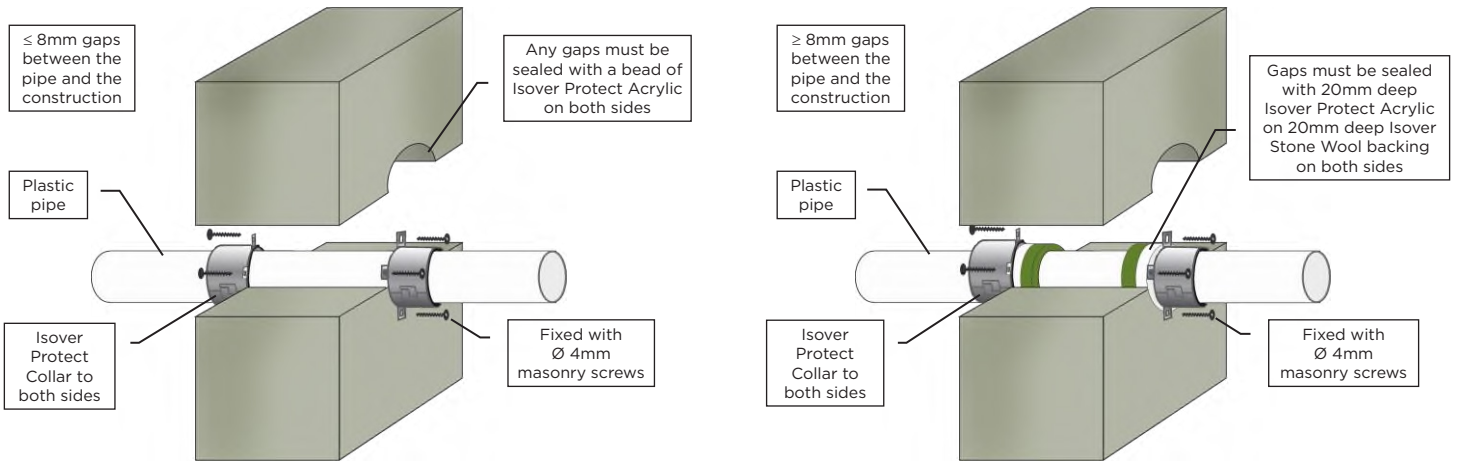
PVC Pipes (PVC-U & PVC-C)

Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	2.4 - 3.7	50	EI 180 (E 240)	EI 180 (E 240)	-	-
40	2.4 - 3.7	50	EI 180 (E 240)	EI 180 (E 240)	-	-
50	2.4 - 3.7	50	EI 180 (E 240)	EI 180 (E 240)	-	-
55	2.5 - 3.9	50	EI 120 (E 180)	EI 120 (E 180)	-	-
63	2.6 - 4.3	50	EI 120 (E 180)	EI 120 (E 180)	-	-
75	2.7 - 4.9	50	EI 120 (E 180)	EI 120 (E 180)	-	-
82	2.8 - 5.2	50	EI 120 (E 180)	EI 120 (E 180)	-	-
90	2.9 - 5.6	50	EI 120 (E 180)	EI 120 (E 180)	-	-
110	3.2 - 6.6	50	EI 120 (E 180)	EI 120 (E 180)	-	-
125	3.4 - 7.5	60	EI 120 (E 120)	EI 120 (E 120)	-	-
140	3.7 - 8.3	60	EI 120 (E 120)	EI 120 (E 120)	-	-
160	4.0 - 9.5	60	EI 120 (E 120)	EI 120 (E 120)	-	-

TECHNICAL DRAWINGS ISOVER PROTECT COLLAR

PVC PLASTIC PIPES FIRE RESISTANCE EI 180-240

≥ 150MM MASONRY OR CONCRETE WALLS

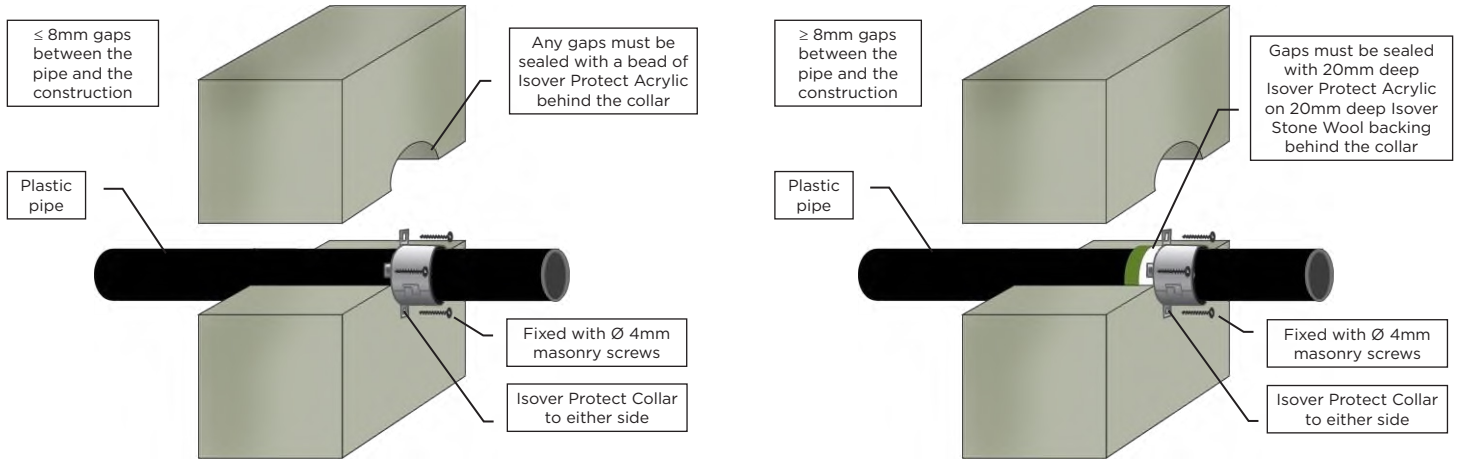


PVC Pipes (PVC-U & PVC-C)

Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	2.0 - 3.7	50	EI 180 (E 240)	EI 180 (E 240)	EI 180 (E 240)	EI 180 (E 240)
40	2.0 - 3.7	50	EI 180 (E 240)	EI 180 (E 240)	EI 180 (E 240)	EI 180 (E 240)
50	2.0 - 3.7	50	EI 180 (E 240)	EI 180 (E 240)	EI 180 (E 240)	EI 180 (E 240)
55	2.1 - 3.9	50	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)
63	2.2 - 4.3	50	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)
75	2.3 - 4.9	50	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)
82	2.4 - 5.2	50	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)
90	2.5 - 5.6	50	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)
110	2.7 - 6.6	50	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)
125	3.1 - 7.5	60	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)
140	3.5 - 8.4	60	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)
160	4.0 - 9.5	60	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)
315	9.2	75	EI 120 (E 120)	-	-	-

PE PLASTIC PIPES FIRE RESISTANCE EI 90-180

≥ 150MM MASONRY OR CONCRETE WALLS

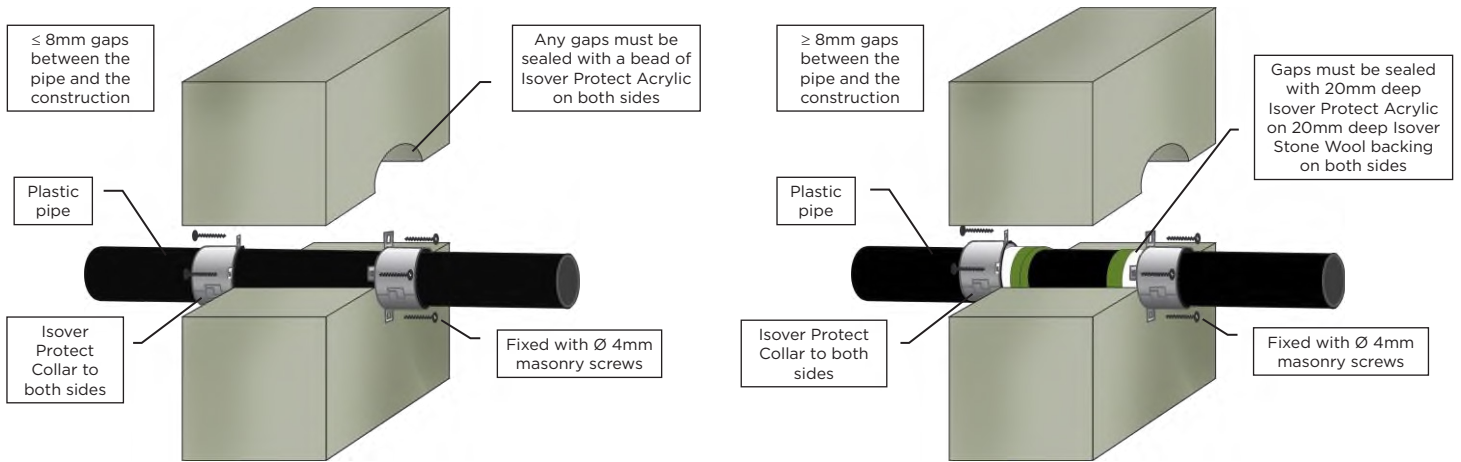


PE, ABS & SAN+PVC Pipes (incl. PE-LD, PE-MD, PE-HD, PE-X and similar to EN 1519-1, EN 12201-2 or EN 12666-1)

Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	3.0 - 4.6	50	EI 120 (E 180)	EI 120 (E 180)	-	-
40	3.0 - 4.6	50	EI 120 (E 180)	EI 120 (E 180)	-	-
50	3.0 - 4.6	50	EI 120 (E 180)	EI 120 (E 180)	-	-
55	3.1 - 4.7	50	EI 90 (E 90)	EI 90 (E 90)	-	-
63	3.1 - 4.9	50	EI 90 (E 90)	EI 90 (E 90)	-	-
63	5.0 - 6.4	50	EI 60 (E 60)	EI 60 (E 60)	-	-
75	3.2 - 5.3	50	EI 90 (E 90)	EI 90 (E 90)	-	-
75	5.4 - 7.3	50	EI 60 (E 60)	EI 60 (E 60)	-	-
82	3.2 - 5.5	50	EI 90 (E 90)	EI 90 (E 90)	-	-
82	5.6 - 8.2	50	EI 60 (E 60)	EI 60 (E 60)	-	-
90	3.3 - 5.7	50	EI 90 (E 90)	EI 90 (E 90)	-	-
90	5.8 - 9.1	50	EI 60 (E 60)	EI 60 (E 60)	-	-
110	3.4 - 6.3	50	EI 90 (E 90)	EI 90 (E 90)	-	-
110	6.4 - 10.0	50	EI 60 (E 60)	EI 60 (E 60)	-	-

PE PLASTIC PIPES FIRE RESISTANCE EI 60-240

≥ 150MM MASONRY OR CONCRETE WALLS

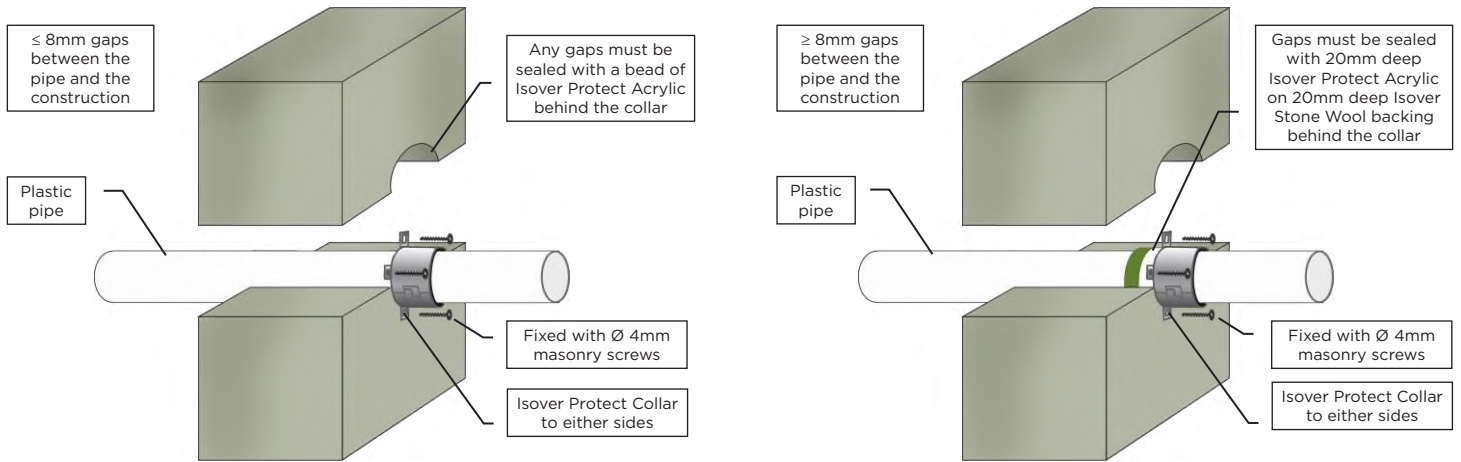


PE, ABS & SAN+PVC Pipes (incl. PE-LD, PE-MD, PE-HD, PE-X and similar to EN 1519-1, EN 12201-2 or EN 12666-1)

Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	3.0 - 4.6	50	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)
40	3.0 - 4.6	50	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)
50	3.0 - 4.6	50	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)
55	3.1 - 4.5	50	EI 180 (E 240)	EI 180 (E 240)	EI 180 (E 240)	EI 180 (E 240)
55	4.6 - 4.8	50	EI 120 (E 180)	EI 120 (E 180)	-	-
63	3.1 - 4.3	50	EI 180 (E 240)	EI 180 (E 240)	EI 180 (E 240)	EI 180 (E 240)
63	4.4 - 5.0	50	EI 120 (E 180)	EI 120 (E 180)	-	-
75	3.2 - 4.1	50	EI 180 (E 240)	EI 180 (E 240)	EI 180 (E 240)	EI 180 (E 240)
75	4.2 - 5.4	50	EI 120 (E 180)	EI 120 (E 180)	-	-
82	3.3 - 3.9	50	EI 180 (E 240)	EI 180 (E 240)	EI 180 (E 240)	EI 180 (E 240)
82	4.0 - 5.7	50	EI 120 (E 180)	EI 120 (E 180)	-	-
90	3.3 - 3.8	50	EI 180 (E 240)	EI 180 (E 240)	EI 180 (E 240)	EI 180 (E 240)
90	3.9 - 5.9	50	EI 120 (E 180)	EI 120 (E 180)	-	-
110	3.4	50	EI 180 (E 240)	EI 180 (E 240)	EI 180 (E 240)	EI 180 (E 240)
110	3.5 - 6.6	50	EI 120 (E 180)	EI 120 (E 180)	-	-
125	3.9 - 5.2	60	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)
125	5.3 - 7.5	60	EI 120 (E 180)	EI 120 (E 180)	-	-
140	4.3 - 7.0	60	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)
140	7.1 - 8.3	60	EI 120 (E 180)	EI 120 (E 180)	-	-
160	4.9 - 9.5	60	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)
200	18.2	75	EI 60 (E 60)	-	-	-
250	22.7	75	EI 90 (E 120)	-	-	-

PP PLASTIC PIPES FIRE RESISTANCE EI 90

≥ 150MM MASONRY OR CONCRETE WALLS

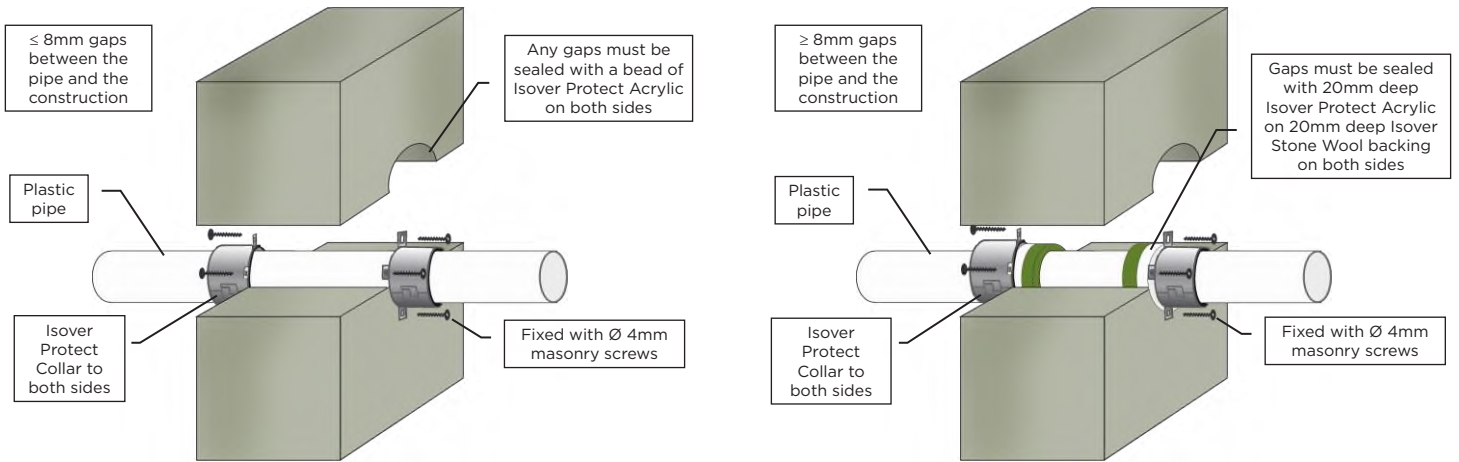


PP Pipes (incl. PP-MV, PP-H, PP-R and similar to EN 1451-1 or DIN 8077/8078)

Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	2.0 - 4.6	50	EI 90 (E 90)	EI 90 (E 90)	-	-
40	2.0 - 4.6	50	EI 90 (E 90)	EI 90 (E 90)	-	-
50	2.0 - 4.6	50	EI 90 (E 90)	EI 90 (E 90)	-	-

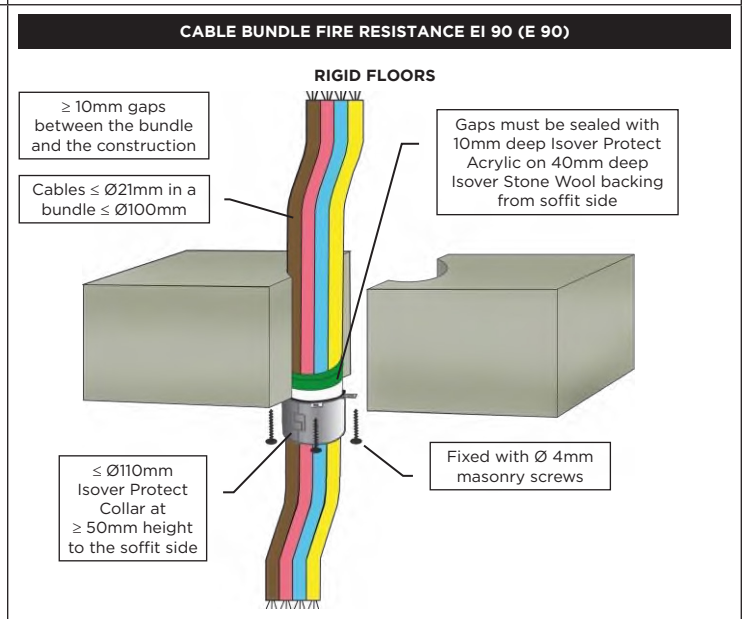
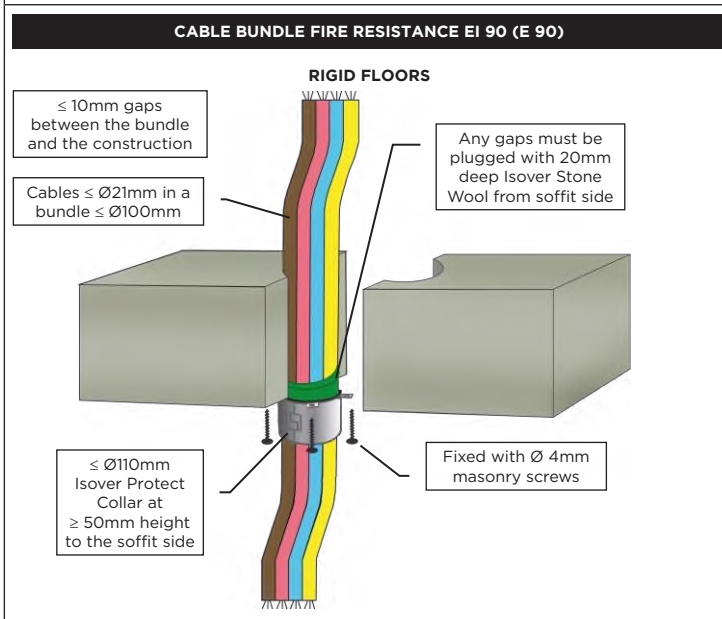
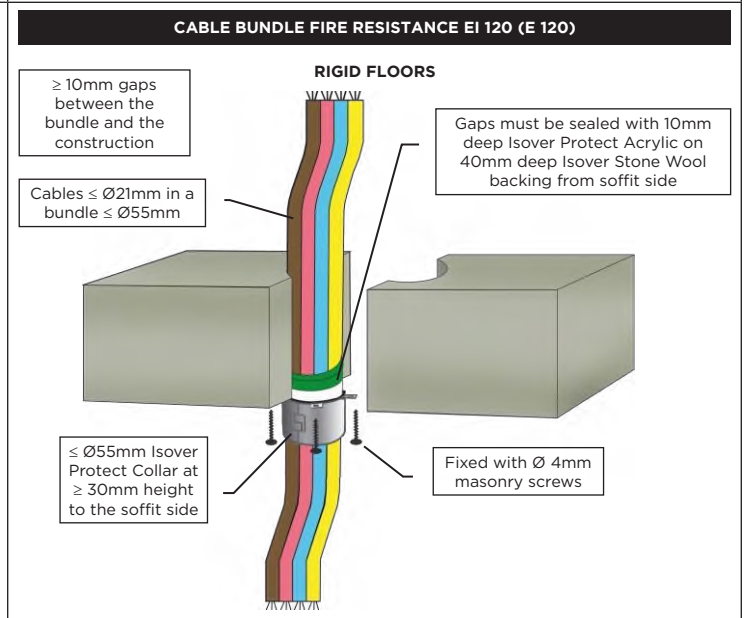
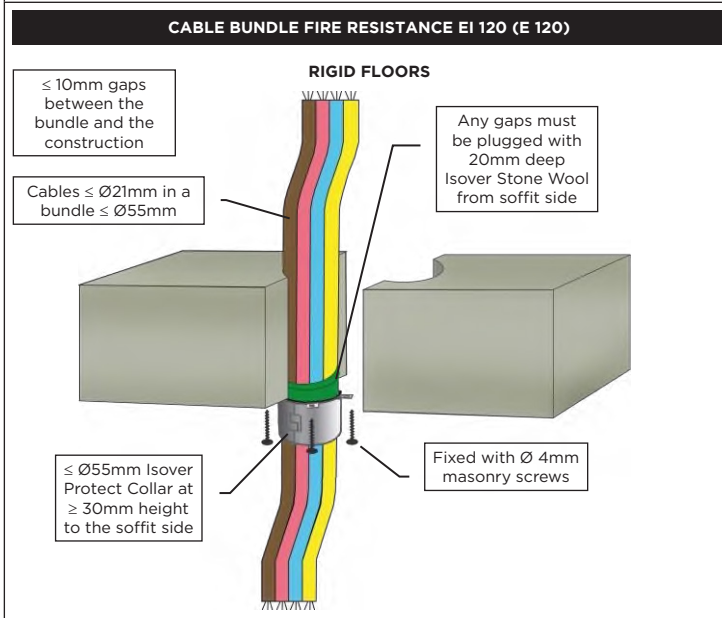
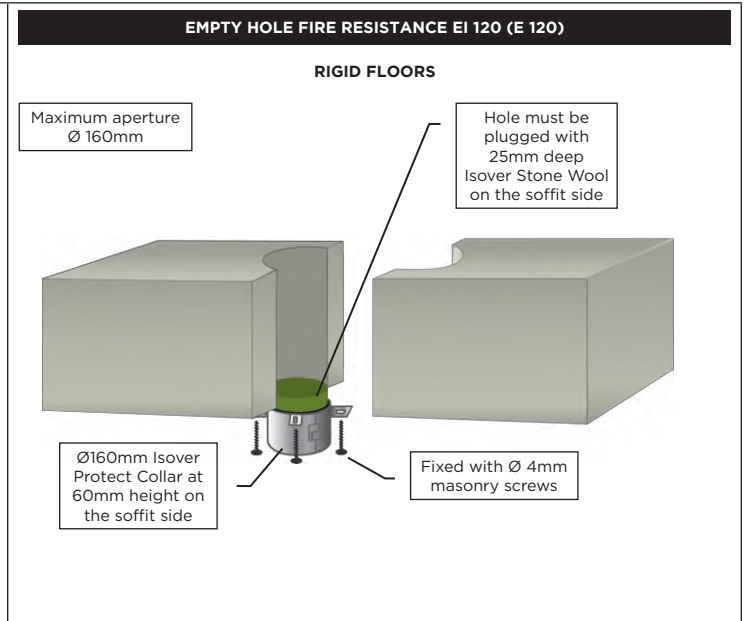
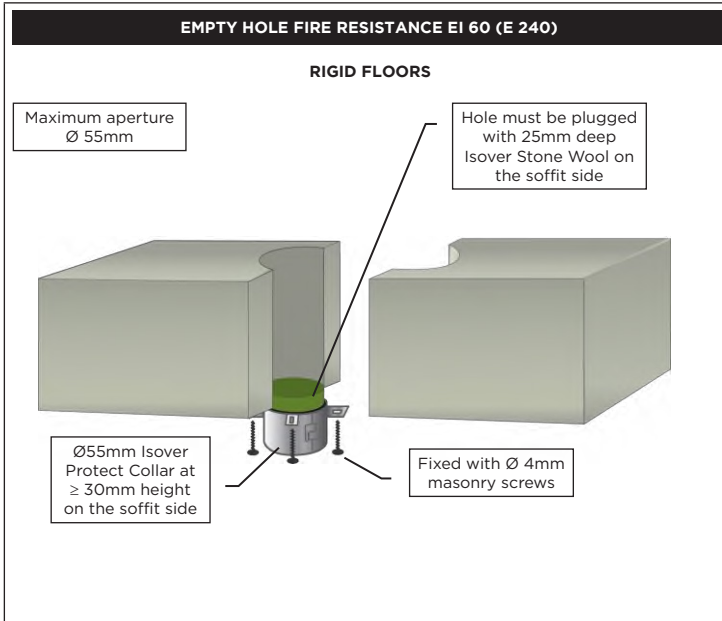
PP PLASTIC PIPES FIRE RESISTANCE EI 60-240

≥ 150MM MASONRY OR CONCRETE WALLS



PP Pipes (incl. PP-MV, PP-H, PP-R and similar to EN 1451-1 or DIN 8077/8078)

Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	1.6 - 5.5	30	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)
40	1.6 - 5.5	30	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)
50	1.6 - 5.5	30	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)
55	1.7 - 5.6	50	EI 240 (E 240)	EI 240 (E 240)	EI 90 (E 240)	EI 90 (E 240)
55	5.7 - 5.9	50	EI 240 (E 240)	EI 240 (E 240)	EI 60 (E 240)	EI 60 (E 240)
63	1.8 - 5.7	50	EI 240 (E 240)	EI 240 (E 240)	EI 90 (E 240)	EI 90 (E 240)
63	5.8 - 6.5	50	EI 240 (E 240)	EI 240 (E 240)	EI 60 (E 240)	EI 60 (E 240)
75	2.0 - 5.9	50	EI 240 (E 240)	EI 240 (E 240)	EI 90 (E 240)	EI 90 (E 240)
75	6.0 - 7.3	50	EI 240 (E 240)	EI 240 (E 240)	EI 60 (E 240)	EI 60 (E 240)
82	2.1 - 6.0	50	EI 240 (E 240)	EI 240 (E 240)	EI 90 (E 240)	EI 90 (E 240)
82	6.1 - 7.9	50	EI 240 (E 240)	EI 240 (E 240)	EI 60 (E 240)	EI 60 (E 240)
90	2.3 - 6.1	50	EI 240 (E 240)	EI 240 (E 240)	EI 90 (E 240)	EI 90 (E 240)
90	6.2 - 8.5	50	EI 240 (E 240)	EI 240 (E 240)	EI 60 (E 240)	EI 60 (E 240)
110	2.7 - 6.3	50	EI 240 (E 240)	EI 240 (E 240)	EI 90 (E 240)	EI 90 (E 240)
110	6.4 - 10.0	50	EI 240 (E 240)	EI 240 (E 240)	EI 60 (E 240)	EI 60 (E 240)
125	3.3 - 11.4	60	EI 180 (E 240)	EI 180 (E 240)	EI 60 (E 240)	EI 60 (E 240)
140	4.0 - 12.8	60	EI 180 (E 240)	EI 180 (E 240)	EI 60 (E 240)	EI 60 (E 240)
160	4.9 - 14.6	60	EI 180 (E 240)	EI 180 (E 240)	EI 180 (E 240)	EI 180 (E 240)



<p>CABLE BUNDLE FIRE RESISTANCE EI 180 (E 180)</p> <p>RIGID FLOORS</p> <p>≤ 10mm gaps between the bundle and the construction</p> <p>Cables ≤ Ø21mm in a bundle ≤ Ø160mm</p> <p>Any gaps must be plugged with 20mm deep Isover Stone Wool from soffit side</p> <p>Fixed with Ø 4mm masonry screws</p> <p>≤ Ø160mm Isover Protect Collar at ≥ 60mm height to the soffit side</p>	<p>CABLE BUNDLE FIRE RESISTANCE EI 180 (E 180)</p> <p>RIGID FLOORS</p> <p>≥ 10mm gaps between the bundle and the construction</p> <p>Cables ≤ Ø21mm in a bundle ≤ Ø160mm</p> <p>Gaps must be sealed with 10mm deep Isover Protect Acrylic on 40mm deep Isover Stone Wool backing from soffit side</p> <p>Fixed with Ø 4mm masonry screws</p> <p>≤ Ø160mm Isover Protect Collar at ≥ 60mm height to the soffit side</p>
<p>CABLE BUNDLE FIRE RESISTANCE EI 60 (E 90)</p> <p>RIGID FLOORS</p> <p>≤ 10mm gaps between the bundle and the construction</p> <p>Cables ≤ Ø80mm in a bundle ≤ Ø125mm</p> <p>Any gaps must be plugged with 20mm deep Isover Stone Wool from soffit side</p> <p>Fixed with Ø 4mm masonry screws</p> <p>Ø125mm Isover Protect Collar at ≥ 60mm height to the soffit side</p>	<p>CABLE BUNDLE FIRE RESISTANCE EI 60 (E 90)</p> <p>RIGID FLOORS</p> <p>≥ 10mm gaps between the bundle and the construction</p> <p>Cables ≤ Ø80mm in a bundle ≤ Ø125mm</p> <p>Gaps must be sealed with 10mm deep Isover Protect Acrylic on 40mm deep Isover Stone Wool backing from soffit side</p> <p>Fixed with Ø 4mm masonry screws</p> <p>Ø125mm Isover Protect Collar at ≥ 60mm height to the soffit side</p>
<p>COPPER OR STEEL PIPE FIRE RESISTANCE EI 120 C/C (E 120)</p> <p>RIGID FLOORS</p> <p>≤ 10mm gaps between the insulation and the construction</p> <p>Copper or steel pipe ≤ Ø42mm</p> <p>Any gaps must be plugged with 20mm deep Isover Stone Wool from soffit side</p> <p>Fixed with Ø 4mm masonry screws</p> <p>9mm continuous elastomeric insulation</p> <p>≤ Ø63mm Isover Protect Collar at 50mm height to the soffit side</p>	<p>COPPER OR STEEL PIPE FIRE RESISTANCE EI 120 C/C (E 120)</p> <p>RIGID FLOORS</p> <p>≥ 10mm gaps between the insulation and the construction</p> <p>Copper or steel pipe ≤ Ø42mm</p> <p>Gaps must be sealed with 10mm deep Isover Protect Acrylic on 40mm deep Isover Stone Wool backing from soffit side</p> <p>Fixed with Ø 4mm masonry screws</p> <p>9mm continuous elastomeric insulation</p> <p>≤ Ø63mm Isover Protect Collar at 50mm height to the soffit side</p>

TECHNICAL DRAWINGS ISOVER PROTECT COLLAR

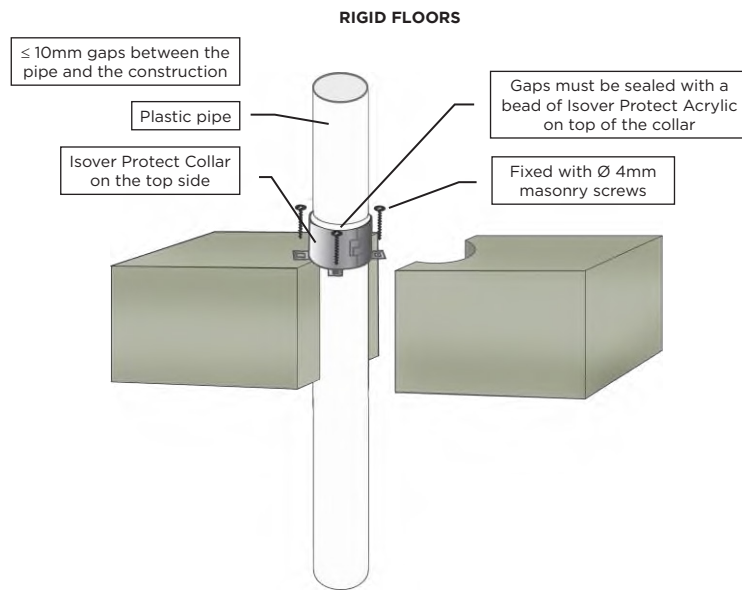
<p>COPPER OR STEEL PIPE FIRE RESISTANCE EI 60 C/C (E 60)</p> <p>RIGID FLOORS</p> <p>≤ 10mm gaps between the insulation and the construction</p> <p>Copper or steel pipe ≤ Ø42mm</p> <p>Any gaps must be plugged with 20mm deep Isover Stone Wool from soffit side</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height, or Ø125-160mm at 60mm height, to the soffit side</p> <p>Fixed with Ø 4mm masonry screws</p> <p>10-50mm continuous elastomeric insulation</p>	<p>COPPER OR STEEL PIPE FIRE RESISTANCE EI 60 C/C (E 60)</p> <p>RIGID FLOORS</p> <p>≥ 10mm gaps between the insulation and the construction</p> <p>Copper or steel pipe ≤ Ø42mm</p> <p>Gaps must be sealed with 10mm deep Isover Protect Acrylic on 40mm deep Isover Stone Wool backing from soffit side</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height, or Ø125-160mm at 60mm height, to the soffit side</p> <p>Fixed with Ø 4mm masonry screws</p> <p>10-50mm continuous elastomeric insulation</p>
<p>COPPER OR STEEL PIPE FIRE RESISTANCE EI 60 C/C (E 120)</p> <p>RIGID FLOORS</p> <p>≤ 10mm gaps between the insulation and the construction</p> <p>Copper or steel pipe ≤ Ø54mm</p> <p>Any gaps must be plugged with 20mm deep Isover Stone Wool from soffit side</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height to the soffit side</p> <p>Fixed with Ø 4mm masonry screws</p> <p>19mm continuous elastomeric insulation</p>	<p>COPPER OR STEEL PIPE FIRE RESISTANCE EI 60 C/C (E 120)</p> <p>RIGID FLOORS</p> <p>≥ 10mm gaps between the insulation and the construction</p> <p>Copper or steel pipe ≤ Ø54mm</p> <p>Gaps must be sealed with 10mm deep Isover Protect Acrylic on 40mm deep Isover Stone Wool backing from soffit side</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height to the soffit side</p> <p>Fixed with Ø 4mm masonry screws</p> <p>19mm continuous elastomeric insulation</p>
<p>COPPER OR STEEL PIPE FIRE RESISTANCE EI 45 C/C (E 120)</p> <p>RIGID FLOORS</p> <p>≤ 10mm gaps between the insulation and the construction</p> <p>Copper or steel pipe ≤ Ø54mm</p> <p>Any gaps must be plugged with 20mm deep Isover Stone Wool from soffit side</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height to the soffit side</p> <p>Fixed with Ø 4mm masonry screws</p> <p>25mm continuous phenolic insulation</p>	<p>COPPER OR STEEL PIPE FIRE RESISTANCE EI 45 C/C (E 120)</p> <p>RIGID FLOORS</p> <p>≥ 10mm gaps between the insulation and the construction</p> <p>Copper or steel pipe ≤ Ø54mm</p> <p>Gaps must be sealed with 10mm deep Isover Protect Acrylic on 40mm deep Isover Stone Wool backing from soffit side</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height to the soffit side</p> <p>Fixed with Ø 4mm masonry screws</p> <p>25mm continuous phenolic insulation</p>

TECHNICAL DRAWINGS ISOVER PROTECT COLLAR

<p>COPPER OR STEEL PIPE FIRE RESISTANCE EI 45 C/C (E 120)</p> <p>RIGID FLOORS</p> <p>≤ 10mm gaps between the insulation and the construction</p> <p>Copper or steel pipe ≤ Ø158mm</p> <p>Any gaps must be plugged with 20mm deep Isover Stone Wool from both sides</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height, or Ø125-200mm at 60mm height, or Ø250mm at 75mm height, to both sides</p> <p>Fixed with Ø 4mm masonry screws</p> <p>25mm continuous phenolic insulation</p>	<p>COPPER OR STEEL PIPE FIRE RESISTANCE EI 45 C/C (E 120)</p> <p>RIGID FLOORS</p> <p>≥ 10mm gaps between the insulation and the construction</p> <p>Copper or steel pipe ≤ Ø158mm</p> <p>Gaps must be sealed with 10mm deep Isover Protect Acrylic on 40mm deep Isover Stone Wool backing from both sides</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height, or Ø125-200mm at 60mm height, or Ø250mm at 75mm height, to both sides</p> <p>Fixed with Ø 4mm masonry screws</p> <p>25mm continuous phenolic insulation</p>
<p>COPPER OR STEEL PIPE FIRE RESISTANCE EI 60 C/C (E 120)</p> <p>RIGID FLOORS</p> <p>≤ 10mm gaps between the insulation and the construction</p> <p>Copper or steel pipe Ø159mm</p> <p>Any gaps must be plugged with 20mm deep Isover Stone Wool from both sides</p> <p>Ø200mm Isover Protect Collar at 60mm height, or Ø250mm at 75mm height, to both sides</p> <p>Fixed with Ø 4mm masonry screws</p> <p>25mm continuous phenolic insulation</p>	<p>COPPER OR STEEL PIPE FIRE RESISTANCE EI 60 C/C (E 120)</p> <p>RIGID FLOORS</p> <p>≥ 10mm gaps between the insulation and the construction</p> <p>Copper or steel pipe Ø159mm</p> <p>Gaps must be sealed with 10mm deep Isover Protect Acrylic on 40mm deep Isover Stone Wool backing from both sides</p> <p>Ø200mm Isover Protect Collar at 60mm height, or Ø250mm at 75mm height, to both sides</p> <p>Fixed with Ø 4mm masonry screws</p> <p>25mm continuous phenolic insulation</p>
<p>COPPER OR STEEL PIPE FIRE RESISTANCE E 120 C/C</p> <p>RIGID FLOORS</p> <p>≤ 10mm gaps between the insulation and the construction</p> <p>Copper or steel pipe ≤ Ø54mm</p> <p>Any gaps must be plugged with 20mm deep Isover Stone Wool from soffit side</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height to the soffit side</p> <p>Fixed with Ø 4mm masonry screws</p> <p>20mm continuous PE foam insulation</p>	<p>COPPER OR STEEL PIPE FIRE RESISTANCE E 120 C/C</p> <p>RIGID FLOORS</p> <p>≥ 10mm gaps between the insulation and the construction</p> <p>Copper or steel pipe ≤ Ø54mm</p> <p>Gaps must be sealed with 10mm deep Isover Protect Acrylic on 40mm deep Isover Stone Wool backing from soffit side</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height to the soffit side</p> <p>Fixed with Ø 4mm masonry screws</p> <p>20mm continuous PE foam insulation</p>

<p>COPPER OR STEEL PIPE FIRE RESISTANCE EI 60 C/C (E 60)</p> <p>RIGID FLOORS</p> <p>≤ 10mm gaps between the insulation and the construction</p> <p>Copper or steel pipe ≤ Ø54mm</p> <p>Any gaps must be plugged with 20mm deep Isover Stone Wool from soffit side</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height, or Ø125-160mm Isover Protect Collar at 60mm height to the soffit side</p> <p>Fixed with Ø 4mm masonry screws</p> <p>40mm continuous PU foam insulation</p>	<p>COPPER OR STEEL PIPE FIRE RESISTANCE EI 60 C/C (E 60)</p> <p>RIGID FLOORS</p> <p>≥ 10mm gaps between the insulation and the construction</p> <p>Copper or steel pipe ≤ Ø54mm</p> <p>Gaps must be sealed with 10mm deep Isover Protect Acrylic on 40mm deep Isover Stone Wool backing from soffit side</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height, or Ø125-160mm Isover Protect Collar at 60mm height to the soffit side</p> <p>Fixed with Ø 4mm masonry screws</p> <p>40mm continuous PU foam insulation</p>
<p>INSULATED ALUPEX PIPE FIRE RESISTANCE EI 120 C/C (E 120)</p> <p>RIGID FLOORS</p> <p>≤ 10mm gaps between the insulation and the construction</p> <p>Alupex pipe ≤ Ø75mm</p> <p>Any gaps must be plugged with 20mm deep Isover Stone Wool from soffit side</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height to the soffit side</p> <p>Fixed with Ø 4mm masonry screws</p> <p>9mm continuous elastomeric insulation</p>	<p>INSULATED ALUPEX PIPE FIRE RESISTANCE EI 120 C/C (E 120)</p> <p>RIGID FLOORS</p> <p>≥ 10mm gaps between the insulation and the construction</p> <p>Alupex pipe ≤ Ø75mm</p> <p>Gaps must be sealed with 10mm deep Isover Protect Acrylic on 40mm deep Isover Stone Wool backing from soffit side</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height to the soffit side</p> <p>Fixed with Ø 4mm masonry screws</p> <p>9mm continuous elastomeric insulation</p>
<p>INSULATED ALUPEX PIPE FIRE RESISTANCE EI 90 C/C (E 120)</p> <p>RIGID FLOORS</p> <p>≤ 10mm gaps between the insulation and the construction</p> <p>Alupex pipe ≤ Ø75mm</p> <p>Any gaps must be plugged with 20mm deep Isover Stone Wool from soffit side</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height, or Ø125-200mm at 60mm height, to the soffit side</p> <p>Fixed with Ø 4mm masonry screws</p> <p>10-50mm continuous elastomeric insulation</p>	<p>INSULATED ALUPEX PIPE FIRE RESISTANCE EI 90 C/C (E 120)</p> <p>RIGID FLOORS</p> <p>≥ 10mm gaps between the insulation and the construction</p> <p>Alupex pipe ≤ Ø75mm</p> <p>Gaps must be sealed with 10mm deep Isover Protect Acrylic on 40mm deep Isover Stone Wool backing from soffit side</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height, or Ø125-200mm at 60mm height, to the soffit side</p> <p>Fixed with Ø 4mm masonry screws</p> <p>10-50mm continuous elastomeric insulation</p>

PVC PLASTIC PIPES FIRE RESISTANCE EI 60-240



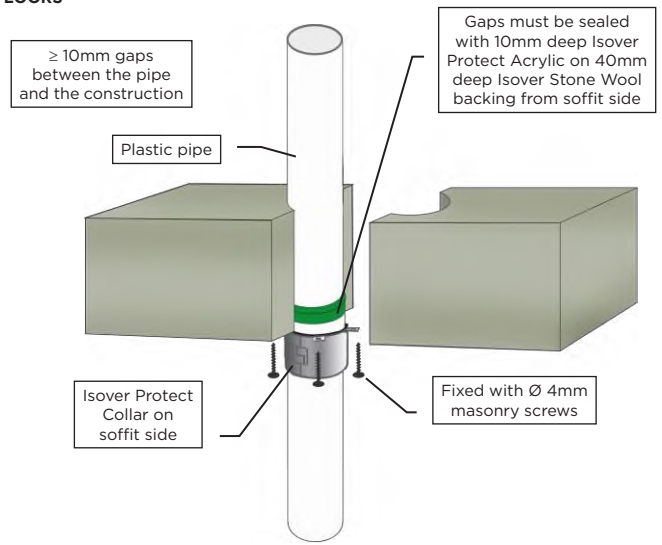
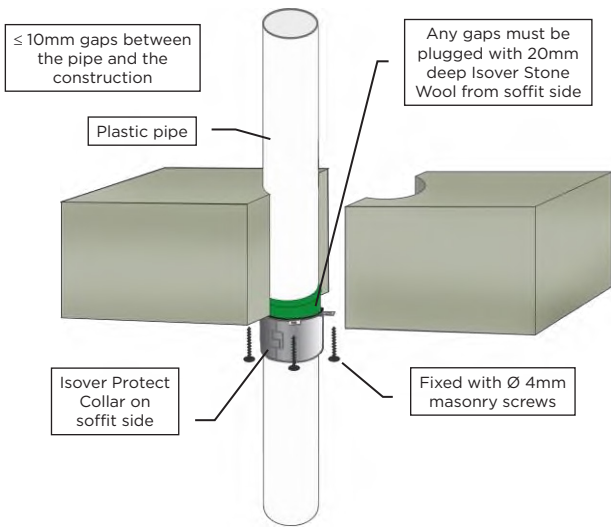
PVC Pipes (PVC-U & PVC-C)

Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	1.9 - 3.7	50	EI 240 (E 240)	EI 240 (E 240)	-	-
40	1.9 - 3.7	50	EI 240 (E 240)	EI 240 (E 240)	-	-
50	1.9 - 3.7	50	EI 240 (E 240)	EI 240 (E 240)	-	-
55	2.0 - 4.0	50	EI 120 (E 120)	EI 120 (E 120)	-	-
63	2.1 - 4.4	50	EI 120 (E 120)	EI 120 (E 120)	-	-
75	2.4 - 5.0	50	EI 120 (E 120)	EI 120 (E 120)	-	-
82	2.5 - 5.3	50	EI 120 (E 120)	EI 120 (E 120)	-	-
90	2.7 - 5.7	50	EI 120 (E 120)	EI 120 (E 120)	-	-
110	3.2 - 6.6	50	EI 120 (E 120)	EI 120 (E 120)	-	-
125	4.1 - 4.9	60	EI 90 (E 180)	EI 90 (E 180)	-	-
125	5.0 - 7.5	60	EI 180 (E 240)	EI 180 (E 240)	-	-
140	5.0 - 6.8	60	EI 90 (E 180)	EI 90 (E 180)	-	-
140	6.9 - 8.3	60	EI 180 (E 240)	EI 180 (E 240)	-	-
160	6.2 - 9.4	60	EI 90 (E 180)	EI 90 (E 180)	-	-
160	9.5	60	EI 180 (E 240)	EI 180 (E 240)	-	-

TECHNICAL DRAWINGS ISOVER PROTECT COLLAR

PVC PLASTIC PIPES FIRE RESISTANCE EI 60-120

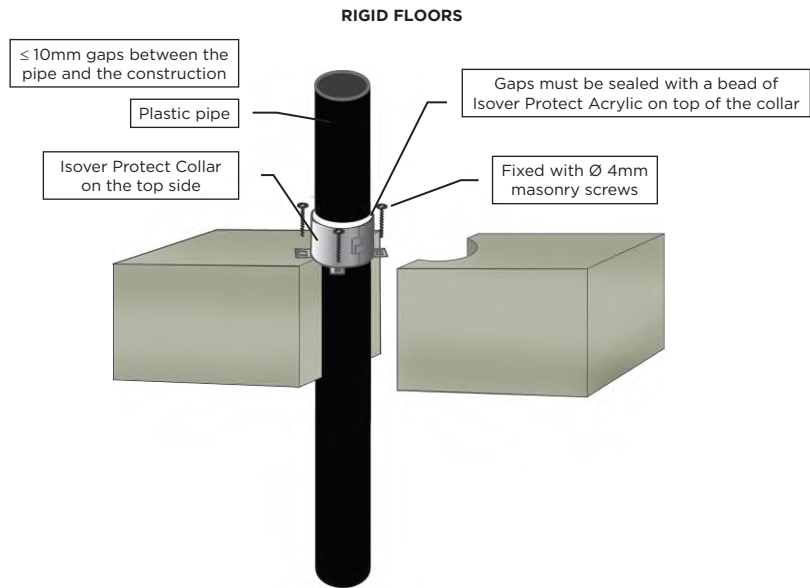
RIGID FLOORS



PVC Pipes (PVC-U & PVC-C)

Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	1.9 - 3.7	30	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
32	2.0 - 3.7	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 90)	EI 60 (E 90)
40	1.9 - 3.7	30	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
40	2.0 - 3.7	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 90)	EI 60 (E 90)
50	2.0 - 3.7	30	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
50	2.0 - 3.7	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 90)	EI 60 (E 90)
55	2.1 - 3.9	30	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
55	2.1 - 2.3	50	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
55	2.4 - 3.9	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
63	2.2 - 4.3	30	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
63	2.2 - 2.9	50	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
63	3.0 - 4.3	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
75	2.5 - 4.9	30	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
75	2.3 - 3.7	50	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)	-
75	3.8 - 4.8	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
82	2.6 - 5.2	30	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
82	2.4 - 4.2	50	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)	-
82	4.3 - 5.1	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
90	2.8 - 5.6	30	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
90	2.5 - 4.8	50	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)	-
90	4.9 - 5.4	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
110	3.2 - 6.6	30	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
110	2.7 - 6.3	50	EI 120 (E 120)	EI 90 (E 120)	EI 60 (E 60)	-
125	2.9 - 7.6	50	EI 90 (E 120)	EI 90 (E 120)	-	-
125	3.2 - 5.5	60	EI 90 (E 120)	EI 90 (E 120)	EI 60 (E 60)	EI 60 (E 60)
125	5.6 - 7.3	60	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
140	3.0 - 8.4	50	EI 90 (E 120)	EI 90 (E 120)	-	-
140	3.2 - 4.9	60	EI 90 (E 120)	EI 90 (E 120)	EI 60 (E 60)	EI 60 (E 60)
140	5.0 - 8.2	60	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
160	3.2 - 9.5	50	EI 90 (E 180)	EI 90 (E 180)	-	-
160	3.2 - 3.9	60	EI 90 (E 180)	EI 90 (E 180)	EI 60 (E 60)	EI 60 (E 60)
160	4.0 - 9.5	60	EI 120 (E 180)	EI 120 (E 180)	EI 60 (E 60)	EI 60 (E 60)
200	4.9 - 11.9	60	EI 60 (E 120)	-	-	-
250	6.1 - 11.9	75	EI 60 (E 60)	-	-	-
315	7.7 - 12.1	75	EI 60 (E 60)	-	-	-
400	15.3	100	EI 60 (E 60)	-	-	-

PE PLASTIC PIPES FIRE RESISTANCE EI 60-240

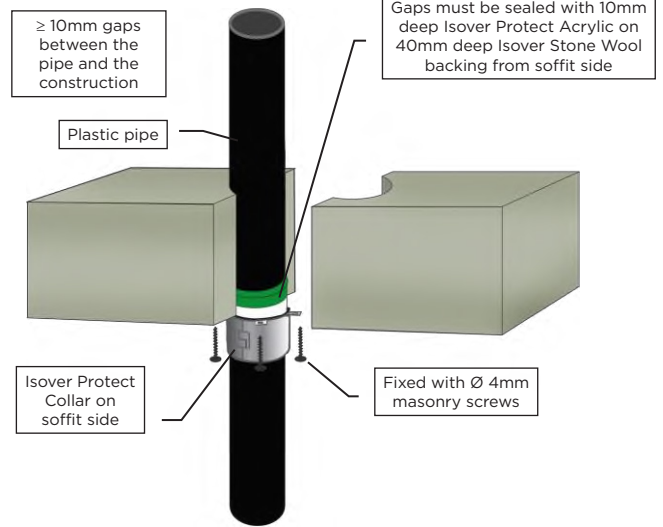
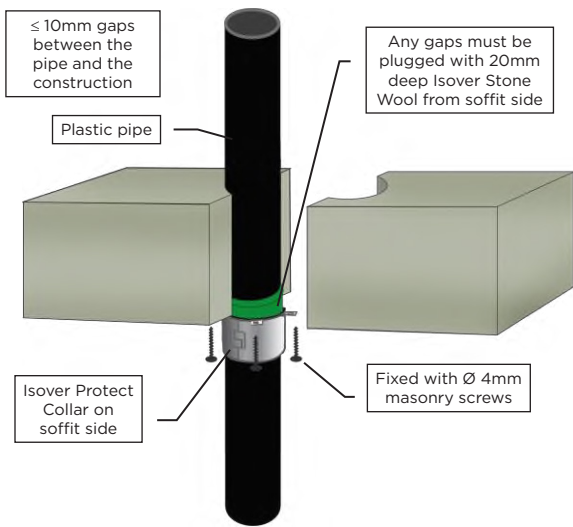


PE, ABS & SAN+PVC Pipes (incl. PE-LD, PE-MD, PE-HD, PE-X and similar to EN 1519-1, EN 12201-2 or EN 12666-1)

Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	3.0 - 4.6	50	EI 240 (E 240)	EI 240 (E 240)	-	-
40	3.0 - 4.6	50	EI 240 (E 240)	EI 240 (E 240)	-	-
50	3.0 - 4.6	50	EI 240 (E 240)	EI 240 (E 240)	-	-
55	3.0 - 5.1	50	EI 60 (E 240)	EI 60 (E 240)	-	-
63	3.0 - 5.8	50	EI 60 (E 240)	EI 60 (E 240)	-	-
75	3.1 - 6.9	50	EI 60 (E 240)	EI 60 (E 240)	-	-
82	3.2 - 7.5	50	EI 60 (E 240)	EI 60 (E 240)	-	-
90	3.2 - 8.2	50	EI 60 (E 240)	EI 60 (E 240)	-	-
110	3.4 - 10.0	50	EI 60 (E 240)	EI 60 (E 240)	-	-
125	3.9 - 9.8	60	EI 60 (E 60)	EI 60 (E 60)	-	-
140	4.3 - 9.7	60	EI 60 (E 60)	EI 60 (E 60)	-	-
160	4.9 - 9.5	60	EI 60 (E 60)	EI 60 (E 60)	-	-

PE PLASTIC PIPES FIRE RESISTANCE EI 60-240

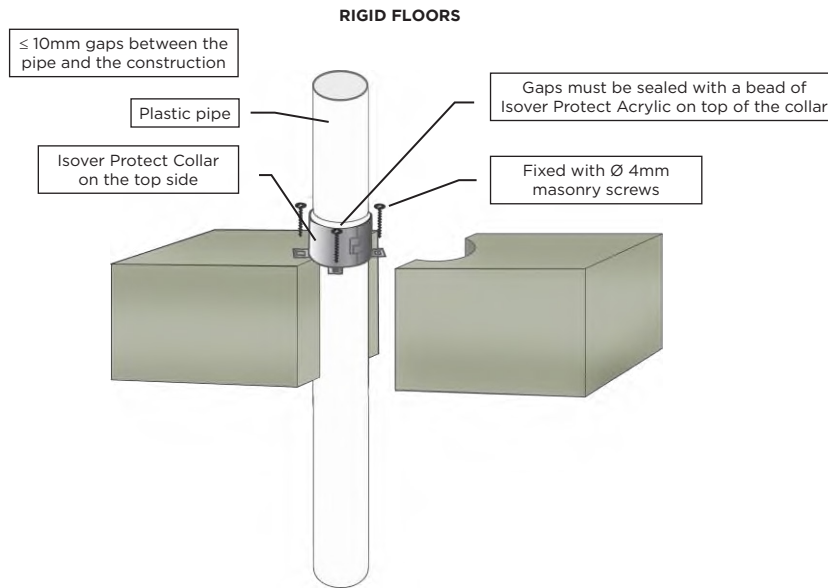
RIGID FLOORS



PE, ABS & SAN+PVC Pipes (incl. PE-LD, PE-MD, PE-HD, PE-X and similar to EN 1519-1, EN 12201-2 or EN 12666-1)

Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	3.0 - 4.6	30	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
32	2.0 - 3.0	50	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)
32	3.1 - 4.6	50	EI 240 (E 240)	EI 240 (E 240)	EI 60 (E 60)	EI 60 (E 60)
40	3.0 - 4.6	30	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
40	2.0 - 3.0	50	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)
40	3.1 - 4.6	50	EI 240 (E 240)	EI 240 (E 240)	EI 60 (E 60)	EI 60 (E 60)
50	3.0 - 4.6	30	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
50	2.0 - 3.0	50	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)
50	3.1 - 4.6	50	EI 240 (E 240)	EI 240 (E 240)	EI 60 (E 60)	EI 60 (E 60)
55	3.0 - 5.2	30	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
55	2.1 - 5.1	50	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
55	3.1 - 5.0	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
63	3.0 - 5.9	30	EI 60 (E 60)	EI 60 (E 60)	-	-
63	2.3 - 3.0	50	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
63	3.1 - 5.8	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
75	3.1 - 6.9	30	EI 60 (E 60)	EI 60 (E 60)	-	-
75	2.6 - 3.1	50	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
75	3.2 - 6.9	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
82	3.1 - 7.6	30	EI 60 (E 60)	EI 60 (E 60)	-	-
82	2.8 - 3.2	50	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
82	3.3 - 7.5	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
90	3.2 - 8.3	30	EI 60 (E 60)	EI 60 (E 60)	-	-
90	3.0 - 3.2	50	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
90	3.3 - 8.2	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
110	3.4 - 9.9	30	EI 60 (E 60)	EI 60 (E 60)	-	-
110	10.0	30	EI 180 (E 180)	EI 180 (E 180)	-	-
110	3.4 - 10.0	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
125	3.9 - 11.3	50	EI 120 (E 120)	EI 120 (E 120)	-	-
125	3.9 - 11.3	60	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
140	4.3 - 12.7	50	EI 120 (E 120)	EI 120 (E 120)	-	-
140	4.3 - 12.7	60	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
160	4.9 - 14.7	50	EI 120 (E 180)	EI 120 (E 180)	-	-
160	4.9 - 14.6	60	EI 120 (E 180)	EI 120 (E 180)	EI 60 (E 60)	EI 60 (E 60)
200	6.2 - 18.2	60	EI 120 (E 240)	-	-	-
250	11.5 - 18.4	75	EI 240 (E 240)	-	-	-
315	18.7	75	EI 240 (E 240)	-	-	-
315	18.8 - 28.6	75	EI 90 (E 90)	-	-	-
400	36.3	100	EI 90 (E 90)	-	-	-

PP PLASTIC PIPES FIRE RESISTANCE EI 60-180

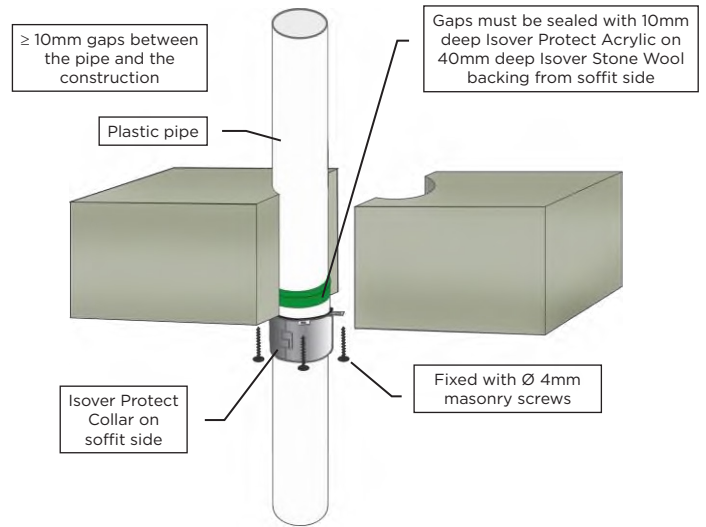
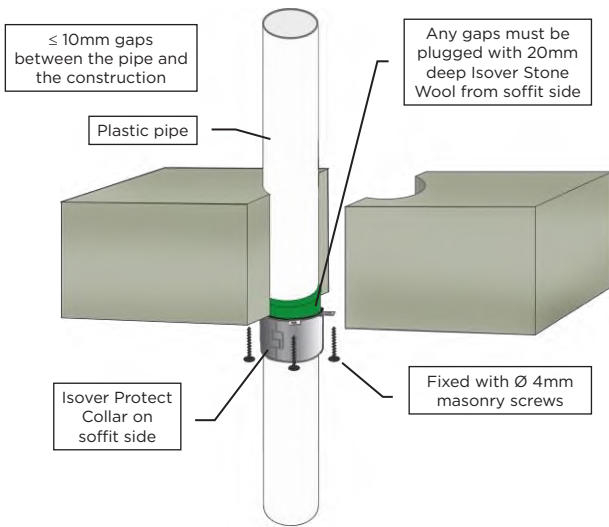


PP Pipes (incl. PP-MV, PP-H, PP-R and similar to EN 1451-1 or DIN 8077/8078)

Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	2.9 - 4.6	50	EI 180 (E 240)	EI 180 (E 240)	-	-
40	2.9 - 4.6	50	EI 180 (E 240)	EI 180 (E 240)	-	-
50	2.9 - 4.6	50	EI 180 (E 240)	EI 180 (E 240)	-	-
55	3.2 - 3.4	50	EI 90 (E 120)	-	-	-
55	3.5 - 5.1	50	EI 90 (E 180)	EI 90 (E 180)	-	-
63	3.7 - 4.3	50	EI 90 (E 120)	-	-	-
63	4.4 - 5.8	50	EI 90 (E 180)	EI 90 (E 180)	-	-
75	4.3 - 5.7	50	EI 90 (E 120)	-	-	-
75	5.8 - 6.9	50	EI 90 (E 180)	EI 90 (E 180)	-	-
82	4.7 - 6.5	50	EI 90 (E 120)	-	-	-
82	6.6 - 7.5	50	EI 90 (E 180)	EI 90 (E 180)	-	-
90	5.2 - 7.4	50	EI 90 (E 120)	-	-	-
90	7.5 - 8.2	50	EI 90 (E 180)	EI 90 (E 180)	-	-
110	6.3 - 9.9	50	EI 90 (E 120)	-	-	-
110	10.0	50	EI 90 (E 180)	EI 90 (E 180)	-	-
125	11.3	60	EI 60 (E 240)	EI 60 (E 240)	-	-
140	12.7	60	EI 60 (E 240)	EI 60 (E 240)	-	-
160	14.6	60	EI 60 (E 240)	EI 60 (E 240)	-	-

PP PLASTIC PIPES FIRE RESISTANCE EI 30-240

RIGID FLOORS

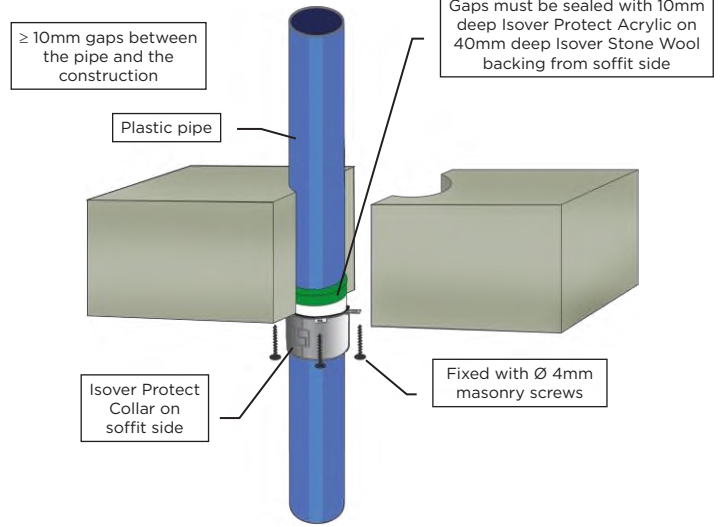
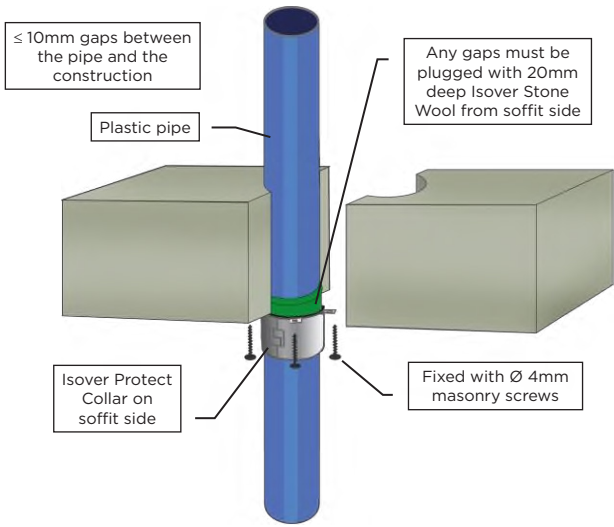


PP Pipes (incl. PP-MV, PP-H, PP-R and similar to EN 1451-1 or DIN 8077/8078)

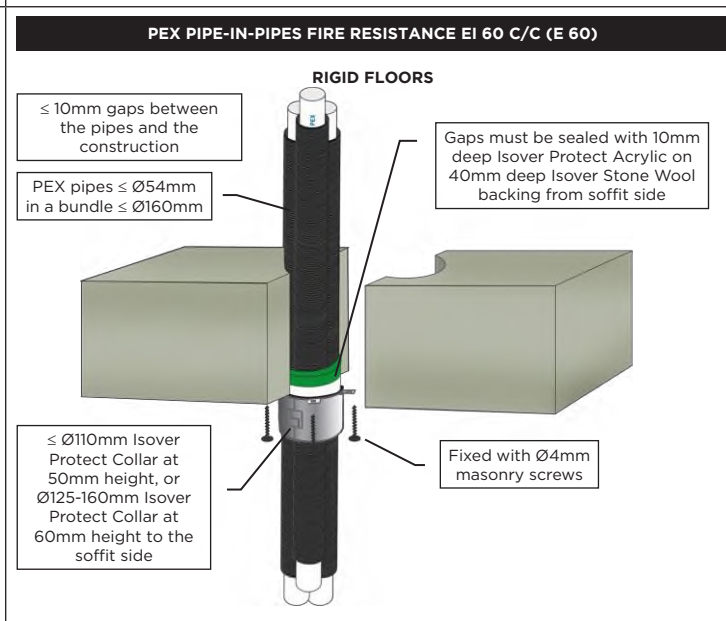
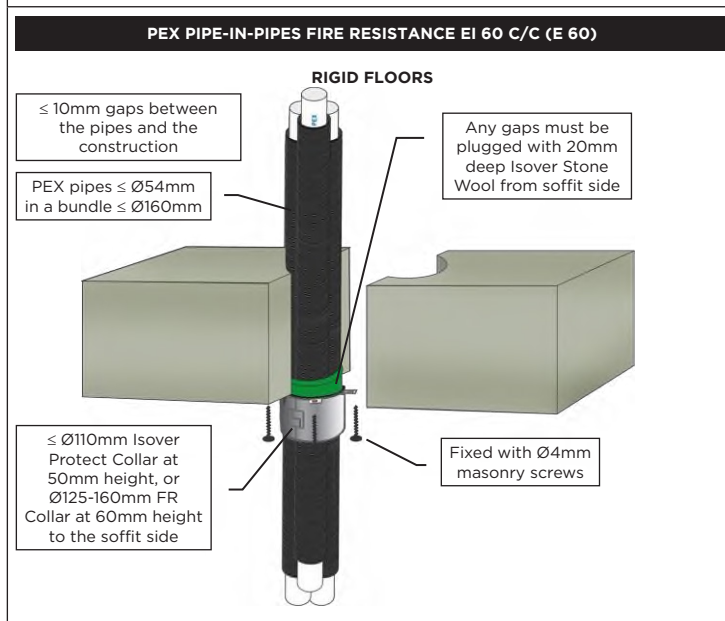
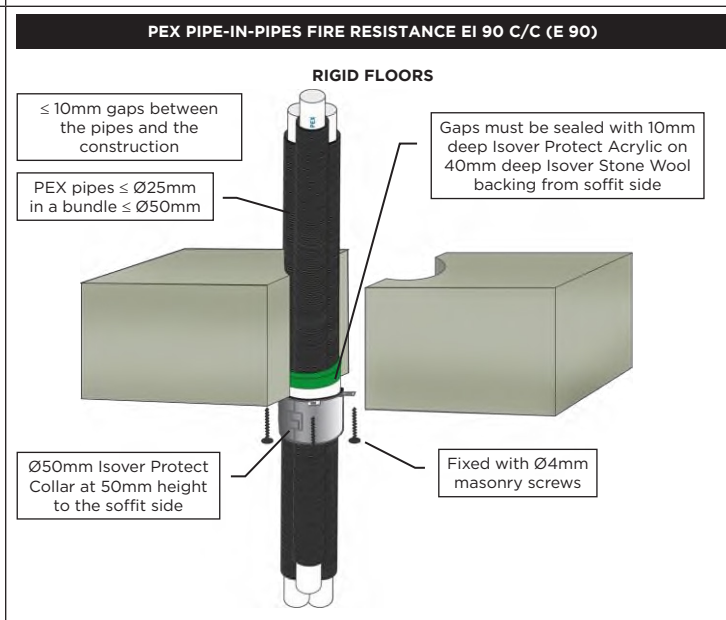
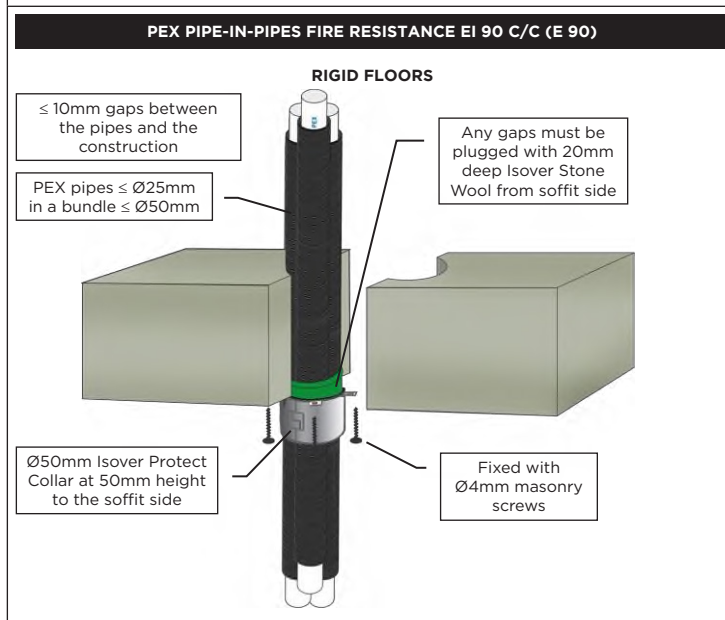
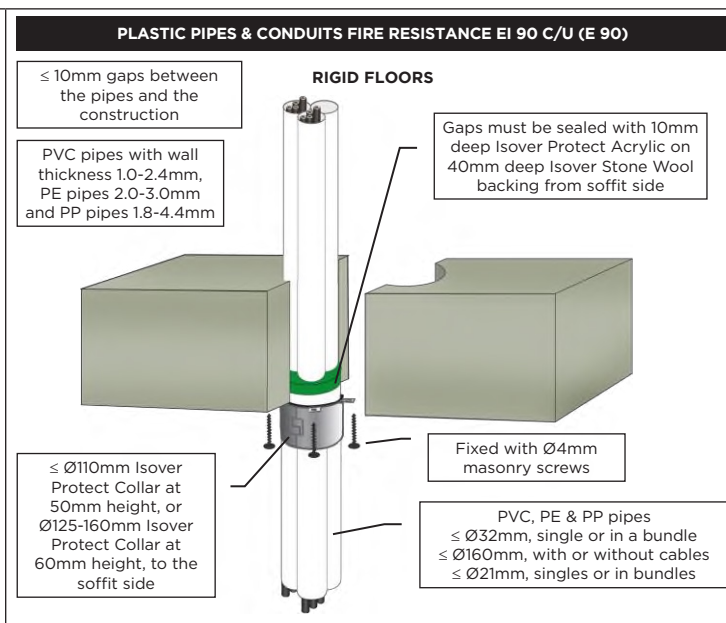
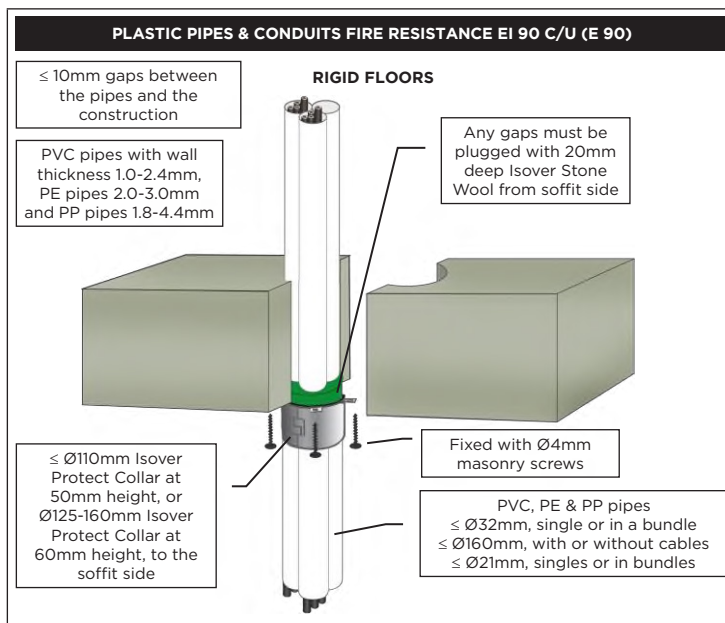
Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	1.8 - 4.6	30	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)
40	1.8 - 4.6	30	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)
50	1.8 - 4.6	30	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)
50	2.9	50	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)
50	3.0 - 4.6	50	EI 180 (E 240)	EI 180 (E 240)	-	-
55	2.0 - 4.8	30	EI 120 (E 120)	EI 120 (E 120)	-	-
55	1.9 - 4.8	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
55	4.9 - 5.1	50	EI 60 (E 60)	EI 60 (E 60)	-	-
63	2.3 - 5.4	30	EI 120 (E 120)	EI 120 (E 120)	-	-
63	2.0 - 5.0	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
63	5.5 - 5.8	50	EI 60 (E 60)	EI 60 (E 60)	-	-
75	2.8 - 5.5	30	EI 120 (E 120)	EI 120 (E 120)	-	-
75	2.2 - 5.4	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
75	5.6 - 6.9	50	EI 60 (E 60)	EI 60 (E 60)	-	-
82	3.1 - 5.6	30	EI 120 (E 120)	EI 120 (E 120)	-	-
82	2.3 - 5.6	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
82	5.7 - 7.5	50	EI 60 (E 60)	EI 60 (E 60)	-	-
90	3.4 - 5.9	30	EI 120 (E 120)	EI 120 (E 120)	-	-
90	2.4 - 5.9	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
90	6.0 - 8.2	50	EI 60 (E 60)	EI 60 (E 60)	-	-
110	4.2 - 6.6	30	EI 180 (E 180)	EI 180 (E 180)	-	-
110	2.7 - 6.6	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
110	6.7 - 10.1	50	EI 60 (E 60)	EI 60 (E 60)	-	-
125	4.7 - 11.4	50	EI 60 (E 60)	EI 60 (E 60)	-	-
125	3.4 - 3.5	60	EI 120 (E 120)	EI 120 (E 120)	-	-
125	3.6 - 8.9	60	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
140	6.8 - 12.8	50	EI 60 (E 60)	EI 60 (E 60)	-	-
140	4.1 - 4.6	60	EI 120 (E 120)	EI 120 (E 120)	-	-
140	4.7 - 11.2	60	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
160	9.5 - 14.6	50	EI 60 (E 60)	EI 60 (E 60)	-	-
160	4.9 - 6.1	60	EI 180 (E 180)	EI 180 (E 180)	-	-
160	6.2	60	EI 180 (E 180)	EI 180 (E 180)	EI 90 (E 90)	EI 90 (E 90)
160	6.3 - 14.6	60	EI 180 (E 180)	EI 180 (E 180)	EI 60 (E 60)	EI 60 (E 60)
200	4.9 - 18.2	60	EI 120 (E 120)	-	-	-
250	15.1 - 22.7	75	EI 60 (E 60)	-	-	-
315	28.6	75	EI 60 (E 60)	-	-	-
400	9.8 - 22.7	100	EI 30 (E 30)	-	-	-

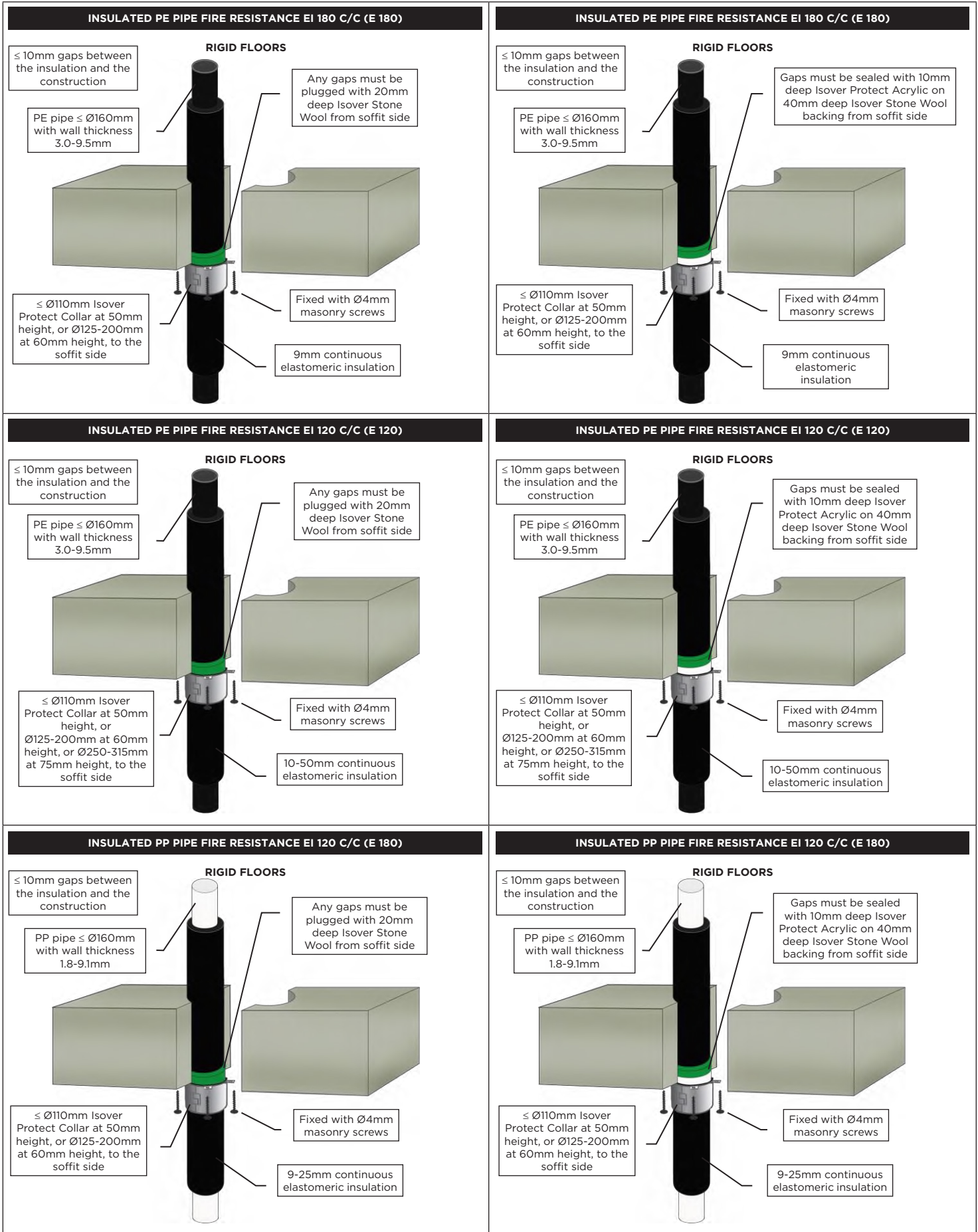
COMPOSITE PLASTIC PIPES FIRE RESISTANCE EI 60-240

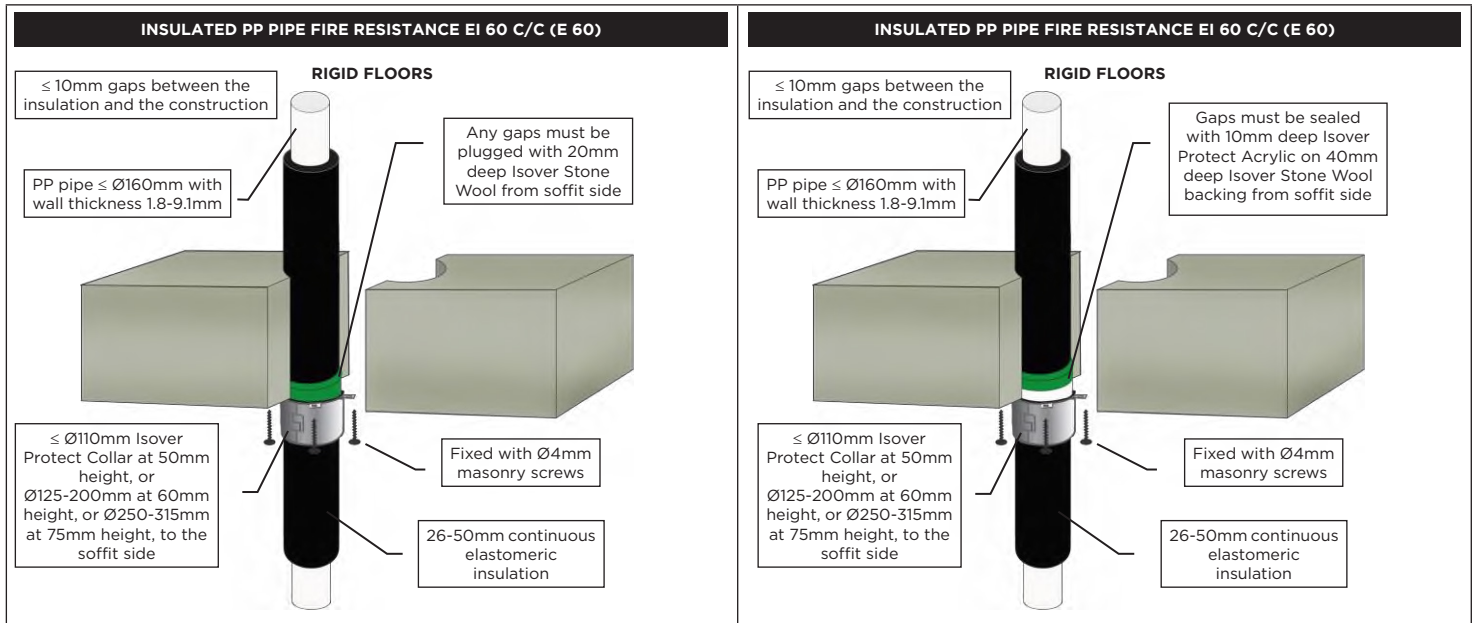
RIGID FLOORS



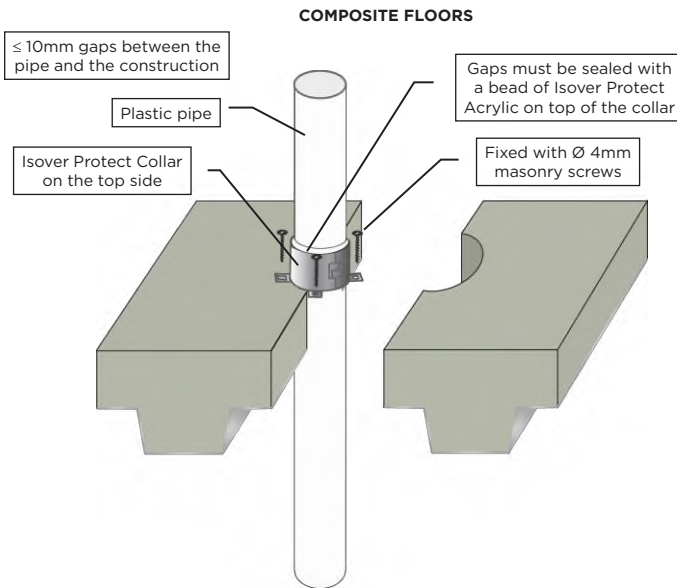
Pipe & Collar Descriptions			Composite Plastic Pipes			
Pipe	Pipe Diameter [mm]	Minimum Collar Height [mm]	Fire Classifications			
			C/C	U/C	C/U	U/U
Aquatherm Green SDR9	32	30	EI 240 (E 240)	-	-	-
	40 - 50	50	EI 240 (E 240)	-	-	-
	63 - 110	50	EI 120 (E 120)	-	-	-
BluePower	32 - 50	50	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)
	75 - 110	50	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)	-
	125	60	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)	-
	160	60	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)	-
Geberit Silent-PP	32 - 50	50	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)
	75 - 110	50	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)	-
Polo-Kal NG pipes	32 - 50	50	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)
	75 - 110	50	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)	-
	125	60	EI 240 (E 240)	EI 240 (E 240)	-	-
	160	60	EI 240 (E 240)	EI 240 (E 240)	(E 240)	-
Rehau Raupiano Plus	40 - 50	50	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)
	75 - 110	50	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	-
	125	60	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)	-
	160	60	EI 240 (E 240)	EI 240 (E 240)	(E 240)	-
Uponor Decibel	50	50	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)
	75 - 110	50	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	-
Wavin AS+	50	50	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)
	75 - 110	50	EI 60 (E 60)	EI 60 (E 60)	-	-
	125 - 160	60	EI 60 (E 60)	EI 60 (E 60)	-	-
	200	60	EI 240 (E 240)	EI 240 (E 240)	-	-
Wavin SiTech	32 - 50	50	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)	EI 240 (E 240)
	75 - 110	50	EI 180 (E 180)	EI 180 (E 180)	EI 180 (E 180)	-







PVC & PE PLASTIC PIPES FIRE RESISTANCE EI 60 - 240



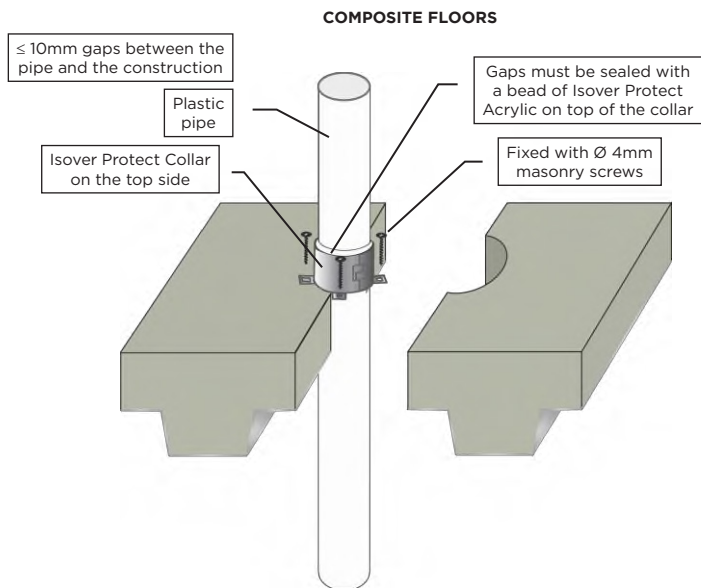
PVC Pipes (PVC-U & PVC-C)

Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	1.9 - 3.7	50	EI 240 (E 240)	EI 240 (E 240)	-	-
40	1.9 - 3.7	50	EI 240 (E 240)	EI 240 (E 240)	-	-
50	1.9 - 3.7	50	EI 240 (E 240)	EI 240 (E 240)	-	-
55	2.0 - 4.0	50	EI 120 (E 120)	EI 120 (E 120)	-	-
63	2.1 - 4.4	50	EI 120 (E 120)	EI 120 (E 120)	-	-
75	2.4 - 5.0	50	EI 120 (E 120)	EI 120 (E 120)	-	-
82	2.5 - 5.3	50	EI 120 (E 120)	EI 120 (E 120)	-	-
90	2.7 - 5.7	50	EI 120 (E 120)	EI 120 (E 120)	-	-
110	3.2 - 6.6	50	EI 120 (E 120)	EI 120 (E 120)	-	-
125	4.1 - 4.9	60	EI 90 (E 180)	EI 90 (E 180)	-	-
125	5.0 - 7.5	60	EI 180 (E 240)	EI 180 (E 240)	-	-
140	5.0 - 6.8	60	EI 90 (E 180)	EI 90 (E 180)	-	-
140	6.9 - 8.3	60	EI 180 (E 240)	EI 180 (E 240)	-	-
160	6.2 - 9.4	60	EI 90 (E 180)	EI 90 (E 180)	-	-
160	9.5	60	EI 180 (E 240)	EI 180 (E 240)	-	-

PE, ABS & SAN+PVC Pipes (incl. PE-LD, PE-MD, PE-HD, PE-X and similar to EN 1519-1, EN 12201-2 or EN 12666-1)

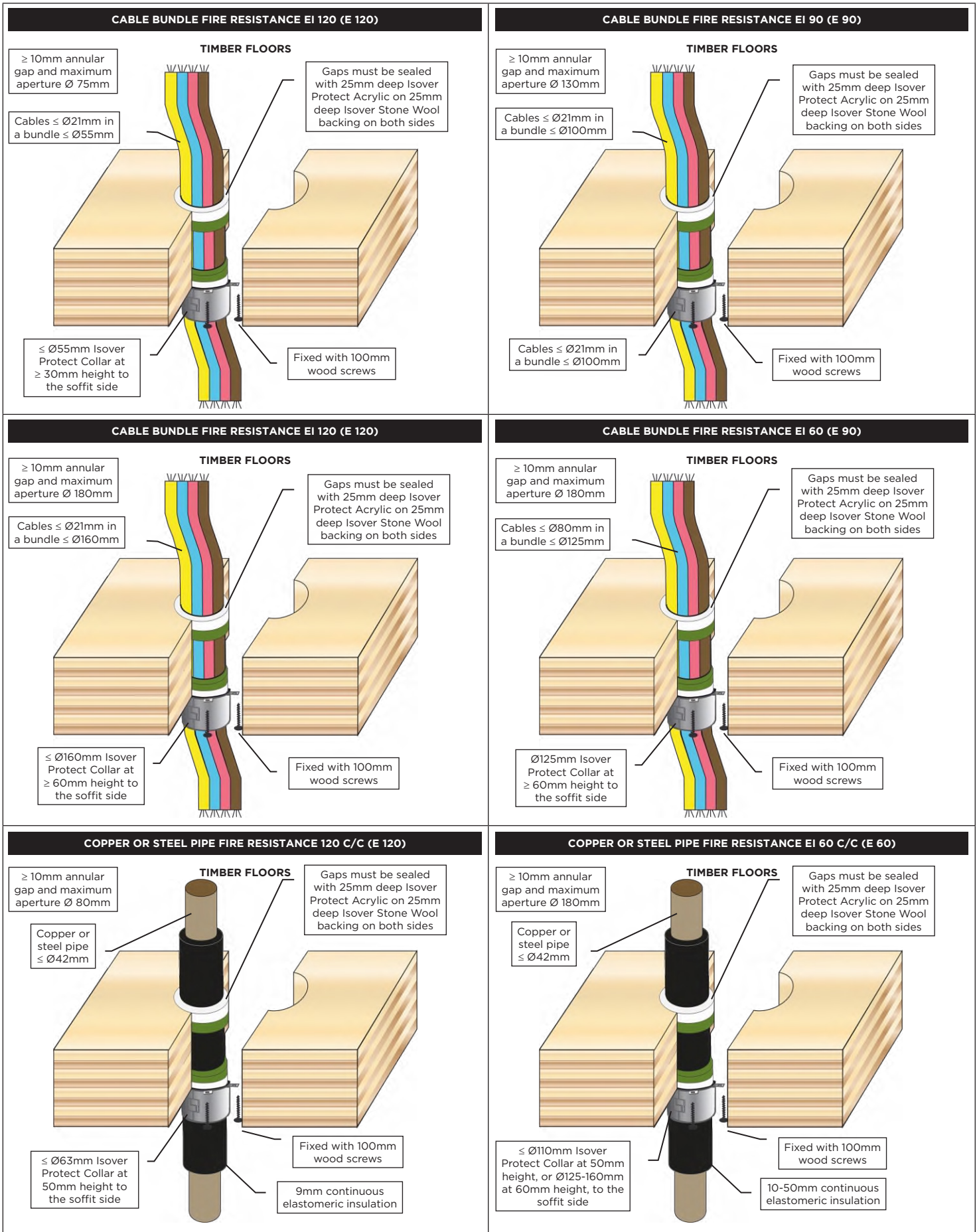
Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	3.0 - 4.6	50	EI 240 (E 240)	EI 240 (E 240)	-	-
40	3.0 - 4.6	50	EI 240 (E 240)	EI 240 (E 240)	-	-
50	3.0 - 4.6	50	EI 240 (E 240)	EI 240 (E 240)	-	-
55	3.0 - 5.1	50	EI 60 (E 240)	EI 60 (E 240)	-	-
63	3.0 - 5.8	50	EI 60 (E 240)	EI 60 (E 240)	-	-
75	3.1 - 6.9	50	EI 60 (E 240)	EI 60 (E 240)	-	-
82	3.2 - 7.5	50	EI 60 (E 240)	EI 60 (E 240)	-	-
90	3.2 - 8.2	50	EI 60 (E 240)	EI 60 (E 240)	-	-
110	3.4 - 10.0	50	EI 60 (E 240)	EI 60 (E 240)	-	-
125	3.9 - 9.8	60	EI 60 (E 60)	EI 60 (E 60)	-	-
140	4.3 - 9.7	60	EI 60 (E 60)	EI 60 (E 60)	-	-
160	4.9 - 9.5	60	EI 60 (E 60)	EI 60 (E 60)	-	-

PP PLASTIC PIPES FIRE RESISTANCE EI 60 - 180

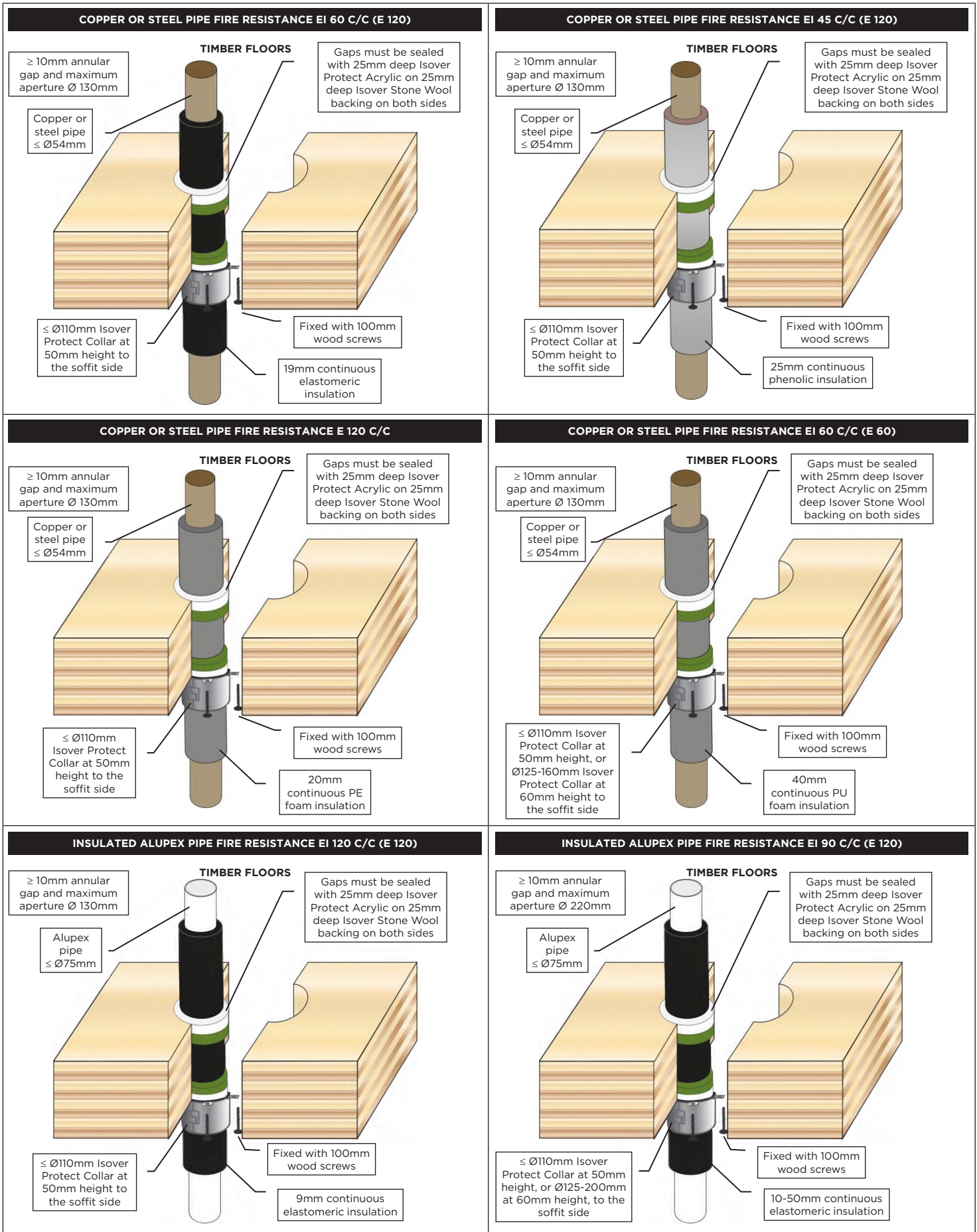


PP Pipes (incl. PP-MV, PP-H, PP-R and similar to EN 1451-1 or DIN 8077/8078)

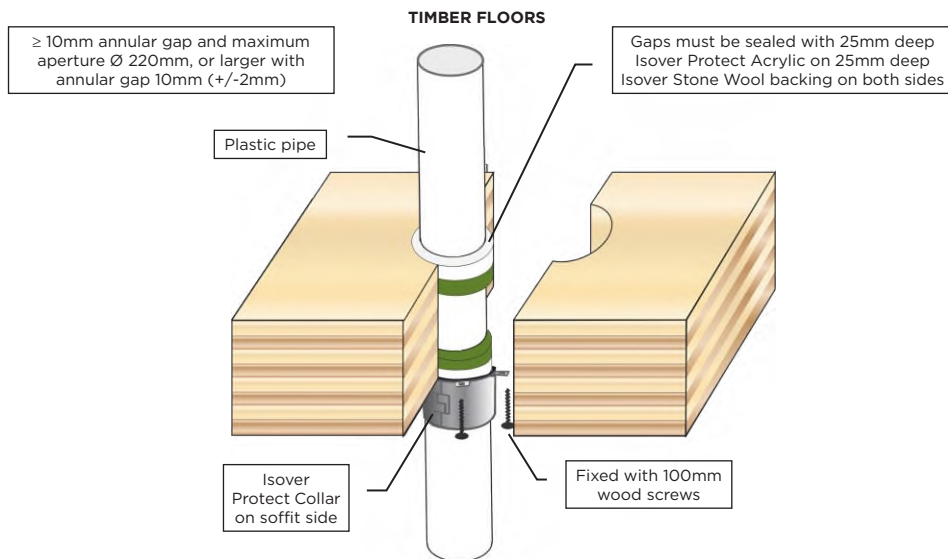
Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	2.9 - 4.6	50	EI 180 (E 240)	EI 180 (E 240)	-	-
40	2.9 - 4.6	50	EI 180 (E 240)	EI 180 (E 240)	-	-
50	2.9 - 4.6	50	EI 180 (E 240)	EI 180 (E 240)	-	-
55	3.2 - 3.4	50	EI 90 (E 120)	-	-	-
55	3.5 - 5.1	50	EI 90 (E 180)	EI 90 (E 180)	-	-
63	3.7 - 4.3	50	EI 90 (E 120)	-	-	-
63	4.4 - 5.8	50	EI 90 (E 180)	EI 90 (E 180)	-	-
75	4.3 - 5.7	50	EI 90 (E 120)	-	-	-
75	5.8 - 6.9	50	EI 90 (E 180)	EI 90 (E 180)	-	-
82	4.7 - 6.5	50	EI 90 (E 120)	-	-	-
82	6.6 - 7.5	50	EI 90 (E 180)	EI 90 (E 180)	-	-
90	5.2 - 7.4	50	EI 90 (E 120)	-	-	-
90	7.5 - 8.2	50	EI 90 (E 180)	EI 90 (E 180)	-	-
110	6.3 - 9.9	50	EI 90 (E 120)	-	-	-
110	10.0	50	EI 90 (E 180)	EI 90 (E 180)	-	-
125	11.3	60	EI 60 (E 240)	EI 60 (E 240)	-	-
140	12.7	60	EI 60 (E 240)	EI 60 (E 240)	-	-
160	14.6	60	EI 60 (E 240)	EI 60 (E 240)	-	-



TECHNICAL DRAWINGS ISOVER PROTECT COLLAR



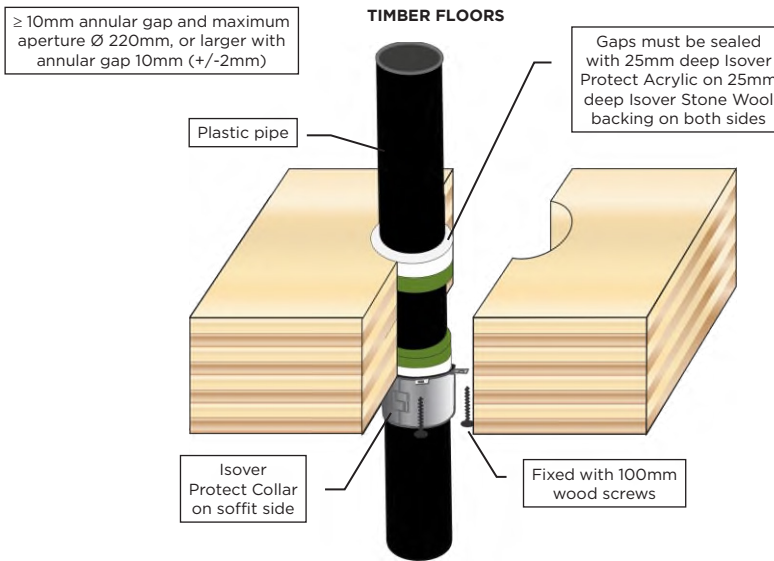
PVC PLASTIC PIPES FIRE RESISTANCE EI 60 - 120



PVC Pipes (PVC-U & PVC-C)

Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	1.9 - 3.7	30	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
32	2.0 - 3.7	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 90)	EI 60 (E 90)
40	1.9 - 3.7	30	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
40	2.0 - 3.7	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 90)	EI 60 (E 90)
50	2.0 - 3.7	30	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)	EI 60 (E 90)
50	2.0 - 3.7	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 90)	EI 60 (E 90)
55	2.1 - 3.9	30	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
55	2.1 - 2.3	50	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
55	2.4 - 3.9	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
63	2.2 - 4.3	30	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
63	2.2 - 2.9	50	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
63	3.0 - 4.3	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
75	2.5 - 4.9	30	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
75	2.3 - 3.7	50	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)	-
75	3.8 - 4.8	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
82	2.6 - 5.2	30	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
82	2.4 - 4.2	50	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)	-
82	4.3 - 5.1	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
90	2.8 - 5.6	30	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
90	2.5 - 4.8	50	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)	-
90	4.9 - 5.4	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
110	3.2 - 6.6	30	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
110	2.7 - 6.3	50	EI 120 (E 120)	EI 90 (E 120)	EI 60 (E 60)	-
125	2.9 - 7.6	50	EI 90 (E 120)	EI 90 (E 120)	-	-
125	3.2 - 5.5	60	EI 90 (E 120)	EI 90 (E 120)	EI 60 (E 60)	EI 60 (E 60)
125	5.6 - 7.3	60	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
140	3.0 - 8.4	50	EI 90 (E 120)	EI 90 (E 120)	-	-
140	3.2 - 4.9	60	EI 90 (E 120)	EI 90 (E 120)	EI 60 (E 60)	EI 60 (E 60)
140	5.0 - 8.2	60	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
160	3.2 - 9.5	50	EI 90 (E 120)	EI 90 (E 120)	-	-
160	3.2 - 3.9	60	EI 90 (E 120)	EI 90 (E 120)	EI 60 (E 60)	EI 60 (E 60)
160	4.0 - 9.5	60	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
200	4.9 - 11.9	60	EI 60 (E 120)	-	-	-
250	6.1 - 11.9	75	EI 60 (E 60)	-	-	-
315	7.7 - 12.1	75	EI 60 (E 60)	-	-	-
400	15.3	100	EI 60 (E 60)	-	-	-

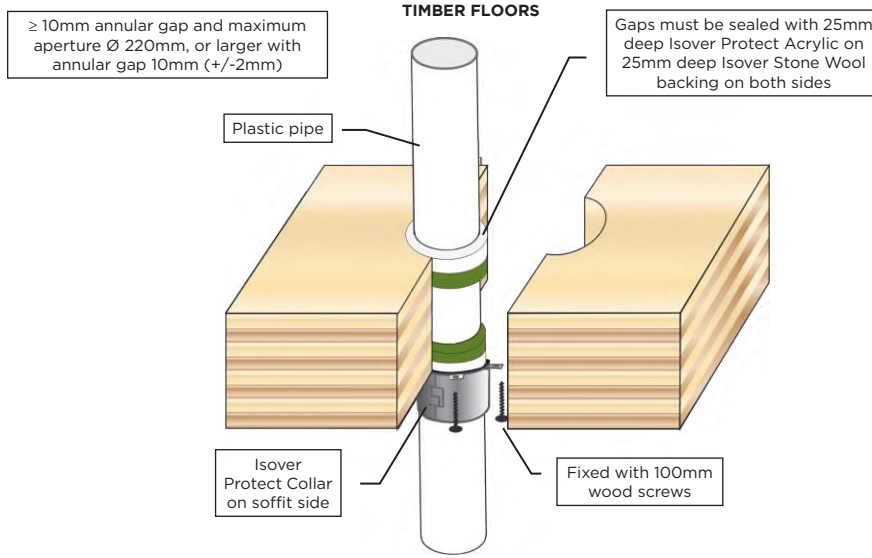
PE PLASTIC PIPES FIRE RESISTANCE EI 60 - 120



PE, ABS & SAN+PVC Pipes (incl. PE-LD, PE-MD, PE-HD, PE-X and similar to EN 1519-1, EN 12201-2 or EN 12666-1)

Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	3.0 - 4.6	30	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
32	2.0 - 3.0	50	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)
32	3.1 - 4.6	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
40	3.0 - 4.6	30	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
40	2.0 - 3.0	50	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)
40	3.1 - 4.6	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
50	3.0 - 4.6	30	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
50	2.0 - 3.0	50	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)
50	3.1 - 4.6	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
55	3.0 - 5.2	30	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
55	2.1 - 5.1	50	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
55	3.1 - 5.0	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
63	3.0 - 5.9	30	EI 60 (E 60)	EI 60 (E 60)	-	-
63	2.3 - 3.0	50	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
63	3.1 - 5.8	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
75	3.1 - 6.9	30	EI 60 (E 60)	EI 60 (E 60)	-	-
75	2.6 - 3.1	50	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
75	3.2 - 6.9	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
82	3.1 - 7.6	30	EI 60 (E 60)	EI 60 (E 60)	-	-
82	2.8 - 3.2	50	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
82	3.3 - 7.5	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
90	3.2 - 8.3	30	EI 60 (E 60)	EI 60 (E 60)	-	-
90	3.0 - 3.2	50	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)	EI 60 (E 60)
90	3.3 - 8.2	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
110	3.4 - 9.9	30	EI 60 (E 60)	EI 60 (E 60)	-	-
110	10.0	30	EI 120 (E 120)	EI 120 (E 120)	-	-
110	3.4 - 10.0	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
125	3.9 - 11.3	50	EI 120 (E 120)	EI 120 (E 120)	-	-
125	3.9 - 11.3	60	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
140	4.3 - 12.7	50	EI 120 (E 120)	EI 120 (E 120)	-	-
140	4.3 - 12.7	60	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
160	4.9 - 14.7	50	EI 120 (E 120)	EI 120 (E 120)	-	-
160	4.9 - 14.6	60	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
200	6.2 - 18.2	60	EI 120 (E 120)	-	-	-
250	11.5 - 18.4	75	EI 120 (E 120)	-	-	-
315	18.7	75	EI 120 (E 120)	-	-	-
315	18.8 - 28.6	75	EI 90 (E 90)	-	-	-
400	36.3	100	EI 90 (E 90)	-	-	-

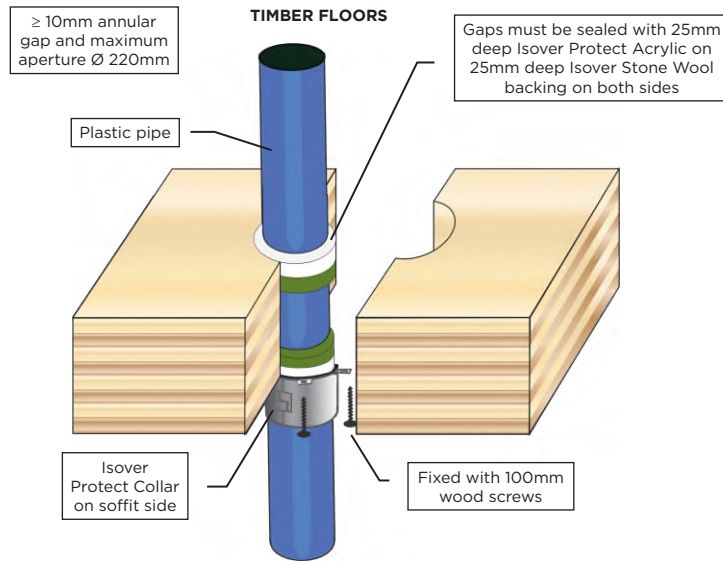
PP PLASTIC PIPES FIRE RESISTANCE EI 30 - 120



PP Pipes (incl. PP-MV, PP-H, PP-R and similar to EN 1451-1 or DIN 8077/8078)

Pipe & Collar Descriptions			Fire Classifications			
Pipe Diameter [mm]	Pipe Wall Thickness [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
32	1.8 - 4.6	30	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)
40	1.8 - 4.6	30	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)
50	1.8 - 4.6	30	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)
55	2.0 - 4.8	30	EI 120 (E 120)	EI 120 (E 120)	-	-
55	1.9 - 4.8	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
55	4.9 - 5.1	50	EI 60 (E 60)	EI 60 (E 60)	-	-
63	2.3 - 5.4	30	EI 120 (E 120)	EI 120 (E 120)	-	-
63	2.0 - 5.0	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
63	5.5 - 5.8	50	EI 60 (E 60)	EI 60 (E 60)	-	-
75	2.8 - 5.5	30	EI 120 (E 120)	EI 120 (E 120)	-	-
75	2.2 - 5.4	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
75	5.6 - 6.9	50	EI 60 (E 60)	EI 60 (E 60)	-	-
82	3.1 - 5.6	30	EI 120 (E 120)	EI 120 (E 120)	-	-
82	2.3 - 5.6	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
82	5.7 - 7.5	50	EI 60 (E 60)	EI 60 (E 60)	-	-
90	3.4 - 5.9	30	EI 120 (E 120)	EI 120 (E 120)	-	-
90	2.4 - 5.9	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
90	6.0 - 8.2	50	EI 60 (E 60)	EI 60 (E 60)	-	-
110	4.2 - 6.6	30	EI 120 (E 120)	EI 120 (E 120)	-	-
110	2.7 - 6.6	50	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
110	6.7 - 10.1	50	EI 60 (E 60)	EI 60 (E 60)	-	-
125	4.7 - 11.4	50	EI 60 (E 60)	EI 60 (E 60)	-	-
125	3.4 - 3.5	60	EI 120 (E 120)	EI 120 (E 120)	-	-
125	3.6 - 8.9	60	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
140	6.8 - 12.8	50	EI 60 (E 60)	EI 60 (E 60)	-	-
140	4.1 - 4.6	60	EI 120 (E 120)	EI 120 (E 120)	-	-
140	4.7 - 11.2	60	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
160	9.5 - 14.6	50	EI 60 (E 60)	EI 60 (E 60)	-	-
160	4.9 - 6.1	60	EI 120 (E 120)	EI 120 (E 120)	-	-
160	6.2	60	EI 120 (E 120)	EI 120 (E 120)	EI 90 (E 90)	EI 90 (E 90)
160	6.3 - 14.6	60	EI 120 (E 120)	EI 120 (E 120)	EI 60 (E 60)	EI 60 (E 60)
200	4.9 - 18.2	60	EI 120 (E 120)	-	-	-
250	15.1 - 22.7	75	EI 60 (E 60)	-	-	-
315	28.6	75	EI 60 (E 60)	-	-	-
400	9.8 - 22.7	100	EI 30 (E 30)	-	-	-

COMPOSITE PLASTIC PIPES FIRE RESISTANCE EI 60 - 120



Pipe & Collar Descriptions		Composite Plastic Pipes				
Pipe	Pipe Diameter [mm]	Minimum Collar Height [mm]	C/C	U/C	C/U	U/U
Aquatherm Green SDR9	32	30	EI 120 (E 120)	-	-	-
	40 - 50	50	EI 120 (E 120)	-	-	-
	63 - 110	50	EI 120 (E 120)	-	-	-
BluePower	32 - 50	50	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)
	75 - 110	50	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	-
	125	60	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	-
	160	60	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	-
Geberit Silent-PP	32 - 50	50	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)
	75 - 110	50	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	-
Polo-Kal NG pipes	32 - 50	50	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)
	75 - 110	50	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	-
	125	60	EI 120 (E 120)	EI 120 (E 120)	-	-
	160	60	EI 120 (E 120)	EI 120 (E 120)	(E 120)	-
Rehau Raupiano Plus	40 - 50	50	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)
	75 - 110	50	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	-
	125	60	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	-
	160	60	EI 120 (E 120)	EI 120 (E 120)	(E 120)	-
ponor Decibel	50	50	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)
	75 - 110	50	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	-
Wavin AS+	50	50	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)
	75 - 110	50	EI 60 (E 60)	EI 60 (E 60)	-	-
	125 - 160	60	EI 60 (E 60)	EI 60 (E 60)	-	-
	200	60	EI 120 (E 120)	EI 120 (E 120)	-	-
Wavin SiTech	32 - 50	50	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)
	75 - 110	50	EI 120 (E 120)	EI 120 (E 120)	EI 120 (E 120)	-

TECHNICAL DRAWINGS ISOVER PROTECT COLLAR

<p>PLASTIC PIPES & CONDUITS FIRE RESISTANCE EI 90 C/U (E 90)</p> <p>TIMBER FLOORS</p> <p>≥ 10mm annular gap and maximum aperture Ø 180mm</p> <p>PVC pipes with wall thickness 1.0-2.4mm, PE pipes 2.0-3.0mm and PP pipes 1.8-4.4mm</p> <p>Gaps must be sealed with 25mm deep Isover Protect Acrylic on 25mm deep Isover Stone Wool backing on both sides</p> <p>Fixed with 100mm wood screws</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height, or Ø125-160mm FR Collar at 60mm height, to the soffit side</p> <p>PVC, PE & PP pipes ≤ Ø32mm, single or in a bundle ≤ Ø160mm, with or without cables ≤ Ø21mm, singles or in bundles</p>	<p>PEX PIPE-IN-PIPES FIRE RESISTANCE EI 90 C/C (E 90)</p> <p>TIMBER FLOORS</p> <p>≥ 10mm annular gap and maximum aperture Ø 70mm</p> <p>PEX pipes ≤ Ø25mm in a bundle ≤ Ø50mm</p> <p>Gaps must be sealed with 25mm deep Isover Protect Acrylic on 25mm deep Isover Stone Wool backing on both sides</p> <p>Fixed with 100mm wood screws</p> <p>Ø50mm Isover Protect Collar at 50mm height to the soffit side</p>
<p>PEX PIPE-IN-PIPES FIRE RESISTANCE EI 60 C/C (E 60)</p> <p>TIMBER FLOORS</p> <p>≥ 10mm annular gap and maximum aperture Ø 70mm</p> <p>PEX pipes ≤ Ø54mm in a bundle ≤ Ø160mm</p> <p>Gaps must be sealed with 25mm deep Isover Protect Acrylic on 25mm deep Isover Stone Wool backing on both sides</p> <p>Fixed with 100mm wood screws</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height, or Ø125-160mm Isover Protect Collar at 60mm height to the soffit side</p>	<p>INSULATED PE PIPE FIRE RESISTANCE EI 120 C/C (E 120)</p> <p>TIMBER FLOORS</p> <p>≥ 10mm annular gap and maximum aperture Ø 220mm, or larger with annular gap 10mm (+/-2mm)</p> <p>PE pipe ≤ Ø160mm with wall thickness 3.0-9.5mm</p> <p>Gaps must be sealed with 25mm deep Isover Protect Acrylic on 25mm deep Isover Stone Wool backing on both sides</p> <p>Fixed with 100mm wood screws</p> <p>9-50mm continuous elastomeric insulation</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height, or Ø125-200mm at 60mm height, or Ø250-315mm at 75mm height, to the soffit side</p>
<p>INSULATED PP PIPE FIRE RESISTANCE EI 120 C/C (E 120)</p> <p>TIMBER FLOORS</p> <p>≥ 10mm annular gap and maximum aperture Ø 220mm</p> <p>PP pipe ≤ Ø160mm with wall thickness 1.8-9.1mm</p> <p>Gaps must be sealed with 25mm deep Isover Protect Acrylic on 25mm deep Isover Stone Wool backing on both sides</p> <p>Fixed with 100mm wood screws</p> <p>9-25mm continuous elastomeric insulation</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height, or Ø125-200mm at 60mm height, to the soffit side</p>	<p>INSULATED PP PIPE FIRE RESISTANCE EI 60 C/C (E 60)</p> <p>TIMBER FLOORS</p> <p>≥ 10mm annular gap and maximum aperture Ø 220mm, or larger with annular gap 10mm (+/-2mm)</p> <p>PP pipe ≤ Ø160mm with wall thickness 1.8-9.1mm</p> <p>Gaps must be sealed with 25mm deep Isover Protect Acrylic on 25mm deep Isover Stone Wool backing on both sides</p> <p>Fixed with 100mm wood screws</p> <p>26-50mm continuous elastomeric insulation</p> <p>≤ Ø110mm Isover Protect Collar at 50mm height, or Ø125-200mm at 60mm height, or Ø250-315mm at 75mm height, to the soffit side</p>

The information in this publication is consistent with current knowledge and our experiences at the time of printing (refer to the print note on the right side). Knowledge and experience are constantly evolving. Therefore, you must ensure to use the latest version of this publication. The described applications of the products cannot consider all the specific circumstances of each individual case. Therefore, you should verify the suitability of our products for the intended purpose. Our Technical Advisory is happy to answer any questions.



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