

## PROMASEAL® Retrofit Collar Plastic Pipe & Other Services Penetration Seals



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### PROMASEAL® Retrofit Collar (square base)

These PROMASEAL® Retrofit Collars are multi purpose collars designed for use with concrete/masonry floors or walls, lightweight partitions and lined ceilings.

These split type collars can be retrofitted where necessary. They are available in a range of sizes to suit plastic pipes up to 315mm outside diameter. The collars have been tested up to 240 minute fire resistance in accordance with the criteria of AS 1530: Part 4: 2005 and AS 4072: Part 1: 2005 with various types and sizes of plastic pipes.

Square based PROMASEAL® Retrofit Collars above 200mm outside diameter have a circular base instead.

It should be noted that the fire resistance performance tested on some of the larger collars is limited in applications. Please consult Promat to ensure the proposed application and requisite fire resistance can be achieved.

### PROMASEAL® Retrofit Collar (circular base)

These PROMASEAL® Retrofit Collars are designed to be fitted around installed pipes that pass through floors and have been tested with ABS, HDPE and uPVC pipes up to 150mm outside diameter in accordance with the criteria of BS 476: Part 20: 1987, AS 1530: Part 4: 2005 and AS 4072: Part 1: 2005.

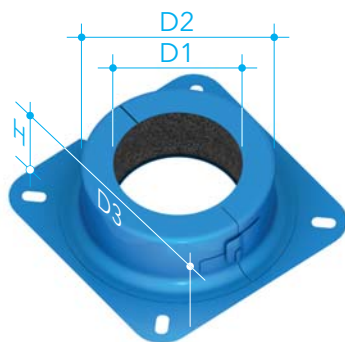
The larger opening of the collars can accommodate the various pipes with different outside diameters. Sockets/joiners fittings are suitable for uPVC pipes up to 100mm outside diameter.

Circular based PROMASEAL® Retrofit Collars should be unclipped, placed around the pipe, re-clipped and pushed tight to the floor.

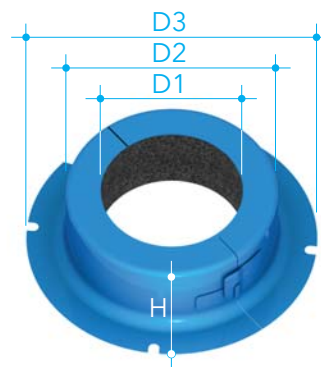
The collars have been tested up to 240 minute fire resistance in floors with ABS and uPVC pipes, up to 180 minute fire resistance in floors with different sized HDPE pipes (except 100mm which is tested up to 240 minutes), and up to 120 minute fire resistance on floors and walls.

Both square and circular based PROMASEAL® Retrofit Collars are splittable to be retrofitted or relocated when necessary.

## Dimension



Square base



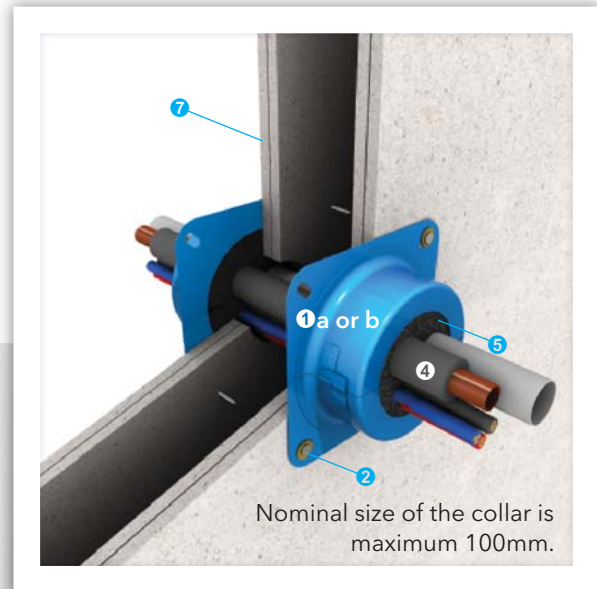
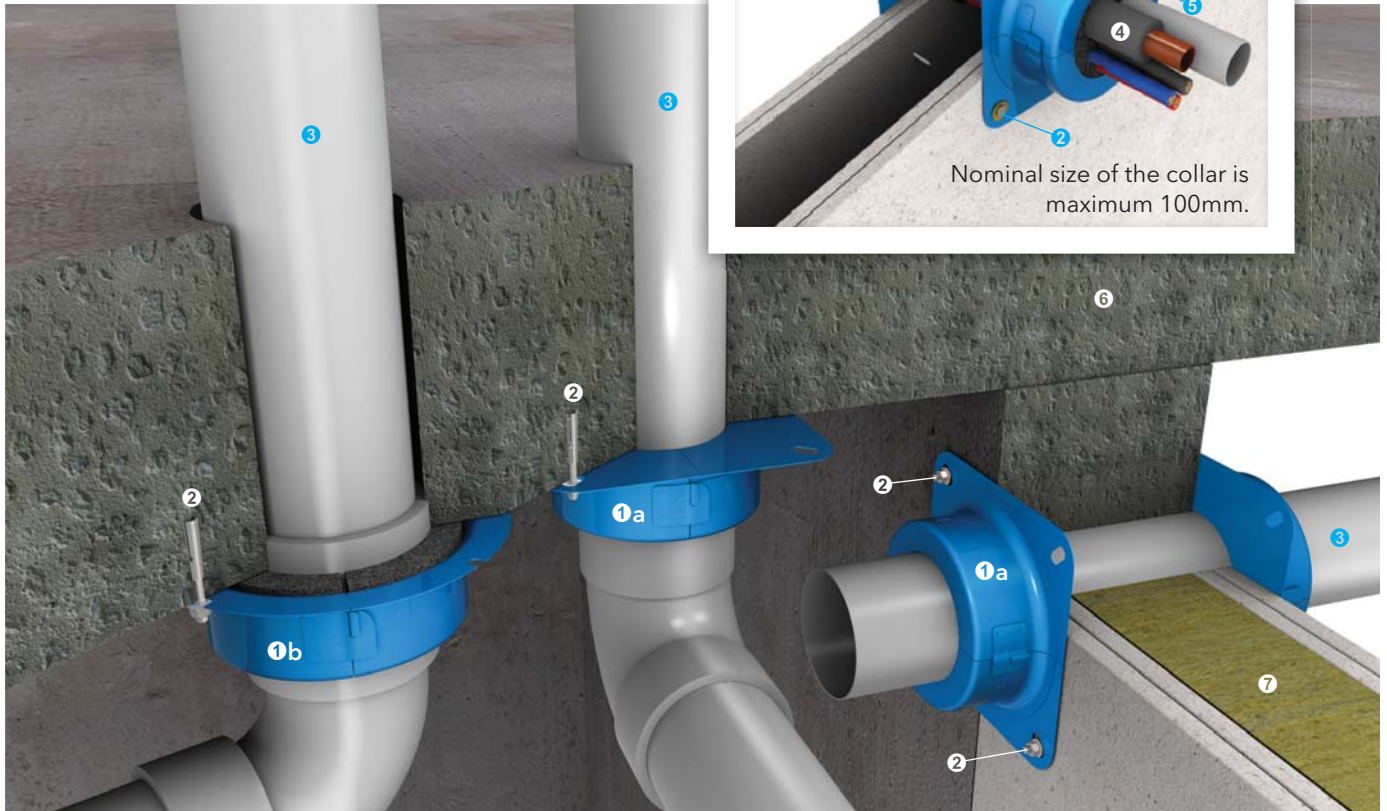
Code no.		FC 40	FC 50	FC 65	FC 80	FC 100	FC 125	FC 150	FC 250	FC 300
Pipe nominal diameter	mm	40	50	65	80	100	125	150	250	300
Body	H mm	43	43	43	43	53	63	73	120	160
	D1 mm	45	58	71	85	112	127	162	254	318
	D2 mm	77	90	103	123	150	165	200	316	402
Flange	D3 mm	112	125	138	158	185	197	235	380 Ø	466 Ø

Circular base

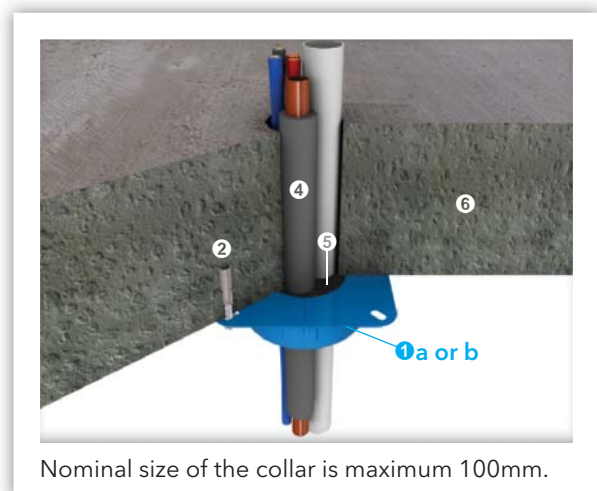
Code no.		FCS 40	FCS 50	FCS 65	FCS 100
ABS pipe nominal diameter	mm	40	50	–	100
HDPE pipe nominal diameter	mm	50	56	75	100
uPVC nominal diameter	mm	40	50	65	100
Body	H mm	43	43	43	53
	D1 mm	56	70	84	127
	D2 mm	84	98	113	167
Flange	D3 mm	131	145	161	214

Up to -/240/240 fire resistance in accordance with the requirements of BS 476: Part 20: 1987, AS 1530: Part 4: 2005 and/or AS 4072: Part 1: 2005; insulation criteria will vary depending on type and size of plastic pipes AND the type of penetrating elements, OR

Up to -/120/120 fire resistance in accordance with the requirements of BS 476: Part 20: 1987, AS 1530: Part 4: 2005 and/or AS 4072: Part 1: 2005; insulation criteria will vary depending on type and size of building services AND the type of penetrating elements



- 1a PROMASEAL® Retrofit Collar (square base)
- 1b PROMASEAL® Retrofit Collar (circular base) for use on sockets
- 2 Suitable fixing, i.e. steel bolt anchors for masonry/concrete floors and walls OR laminating screws for lightweight partitions
- 3 Various plastic piping, e.g. ABS, HDPE, uPVC
- 4 Various building services, e.g. electrical cables, plastic (uPVC or PEX) pipes and/or insulated copper pipes
- 5 All gaps between collars and services filled with PROMASEAL® Graftex
- 6 Fire resistant concrete/masonry floors or walls
- 7 Fire resistant steel/timber framed lightweight partitions



Promat provides a wide range of systems for compartmentation, fire resistant air and cable ducts, structural steel protection, fire stopping and partitions. For assistance with any passive fire protection problems, contact the nearest Promat office.



## PROMASEAL® Retrofit Collar (square base)

### Plastic pipe penetration seals

#### Retrofit installation to underside of floors

Square based PROMASEAL® Retrofit Collar (FC type) has a simple “clip and hinge” system, allowing the collar to be opened, placed or repositioned around the pipe, closed and re-clipped.

These PROMASEAL® Retrofit Collars can be used where up to 240 minute fire resistance is required with plastic pipes up to 250mm outside diameter fixed to the soffit of concrete/masonry floors (with an equal or greater fire resistance level) through the holes at the collar flange using 32mm x 6mm steel bolt anchors or bolts. The floor must be in a secure condition for holding the anchors.

For fixing plastic pipes up to 150mm outside diameter, 25mm long steel bolt anchors may be used. Plastic pipes up to 315mm outside diameter are tested up to 120 minute fire resistance. For unvented plastic pipes greater than 225mm outside diameter, the pipes are capped during the fire test on both sides of the floor either exposed or unexposed to fire.

Backfill all annular gaps greater than 12mm between the plastic pipe and the floor with PROMASEAL® Mortar or other commercial grade mortar mix. A suitable water resistant sealant (e.g. PROMASEAL® Supa Mastic) may be applied around the pipe on top side of the floor if a water seal is required.

If there is a possibility of pipe movement that might cause cracks in the mortar sealing between the plastic pipe and the floor, it is advisable to seal the pipe with PROMASEAL®-A Acrylic Sealant to prevent cold smoke ingress. However, this is not necessary for the required fire resistance performance.

Square based PROMASEAL® Retrofit Collars have been tested with various types of plastic pipes but will not accommodate fittings. This collar may also be employed to protect general building services passing through concrete/masonry floors, e.g. electrical cables, uPVC pipes and lagged copper pipes.

#### **-/240/240 fire resistant cast-in installation of plastic pipes up to 150mm outside diameter in floors**

Insert the body of the square based PROMASEAL® Retrofit Collar (FC type) into the cored hole of the floor from below, leaving the collar flange flush with the underside of the floor. The flange is fixed to soffit of the floor (with an equal or greater fire resistance level) using minimum 32mm x 6mm steel bolt anchors or 25mm x 6mm steel masonry fixings. Ensure all fixing points are used. Backfill all annular gaps on top side of the floor with PROMASEAL® Mortar or other commercial grade mortar mix.

Square based PROMASEAL® Retrofit Collars are not designed to hold plastic pipes in position. Please contact Promat for PROMASEAL® Hi-Blu and PROMASEAL® Green Cast-in Collars or PromaSnap® Floor Waste System for a more efficient cast-in application.

#### Retrofit installation to concrete/masonry walls

Square based PROMASEAL® Retrofit Collars have been tested up to 120 minute fire resistance with various types of plastic pipes up to 100mm outside diameter in concrete/masonry walls with minimum 96mm thickness. The collars are attached to either or both sides of the walls exposed to fire.

Fix the collar to the wall through the holes at the collar flange using 50mm long steel bolt anchors.

Backfill all annular gaps between the plastic pipe and the wall with PROMASEAL® Mortar, other commercial grade mortar mix or PROMASEAL®-A Acrylic Sealant.

Square based PROMASEAL® Retrofit Collars have also been tested up to 180 minute fire resistance with HDPE and uPVC pipes of 315mm outside diameter fixed to both sides of the wall. This application is achievable for unvented pipes greater than 250mm outside diameter.

Fix the collar to the wall through the holes at the collar flange using 50mm long steel bolt anchors.

#### Retrofit installation to ceilings

Square based PROMASEAL® Retrofit Collars have been tested up to 120 minute fire resistance with various types of plastic pipes up to 150mm outside diameter screw fixed to the trimmed framing of the ceiling (with an equal or greater fire resistance level) through the holes in the collar flange.

All annular gaps between the plastic pipe and the ceiling board must be no greater than 15mm and filled with PROMASEAL®-A Acrylic Sealant to the full depth of the board. Please consult Promat for specific requirements for various ceiling systems.

## PROMASEAL® Retrofit Collar (circular base)

### Plastic pipe penetration seals

#### Retrofit installation to underside of floors

Circular based PROMASEAL® Collars (FCS) have been tested on ABS, HDPE and uPVC pipes up to 150mm outside diameter in concrete/masonry floors (with an equal or greater fire resistance level) with and without a pipe fitting at position. These collars are specifically designed for installing readily fixed plastic pipes to accommodate fitting of the pipe through the collar.

The large opening of the collars can accommodate ABS or HDPE pipes with different outside diameters and some imported pipe sizes.

Fix the collar to the floor through all four slots at the collar flange using minimum 20mm x 5mm steel bolt anchors (e.g. Redi Drive).

*Continued on opposite page*

If the pipes are passing cored holes of a floor that do not have to be backfilled with mortar, it is necessary to seal all annular gaps between the pipe and the floor with a bead of PROMASEAL®-A Acrylic Sealant approximately 10mm deep into the gap on underside of the floor. If the annular gap is greater than 8mm it must be backfilled with mortar.

### **-/240/240 fire resistant cast-in installation of plastic pipes up to 150mm outside diameter in floors**

Nail the circular based PROMASEAL® Retrofit Collar (FCS type) to the formwork with the collar flange facing down or screw fixed to the metal deck formwork. Cut a section of the plastic pipe that will be used with the collar and push firmly to the collar opening until it touches the formwork. Ensure the pipe is cut level and touching the formwork all round, and is long enough to protrude above the proposed floor level.

It is wise to cover the open (top) end of the pipe to prevent concrete, masonry or other unwanted waste materials from entering. Always ensure the pipe is fixed in such a way that it remains true to the vertical axis during and after the concrete pour.

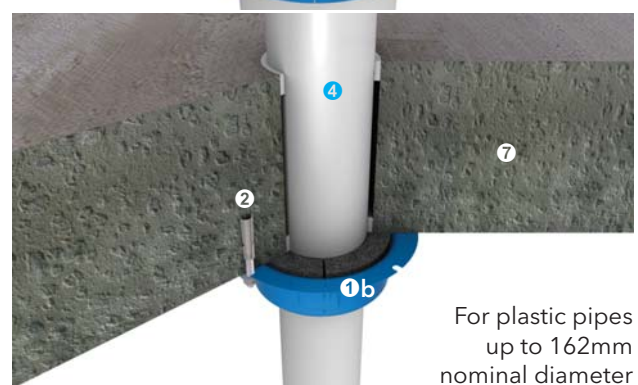
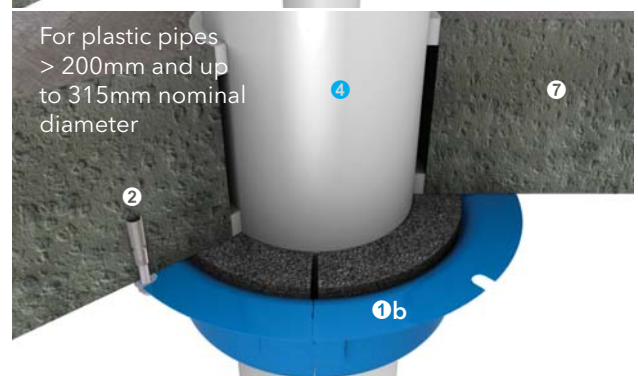
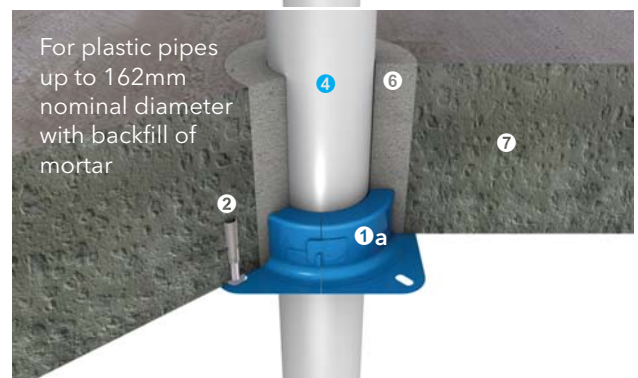
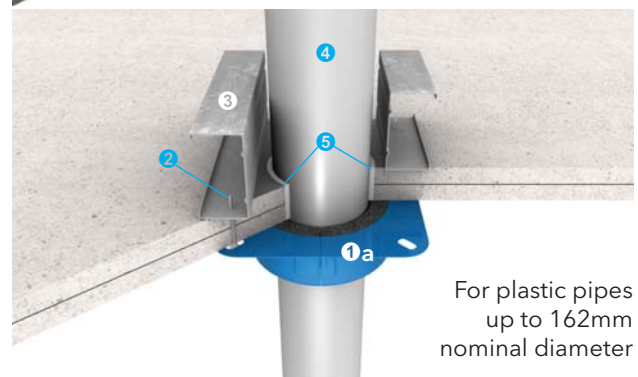
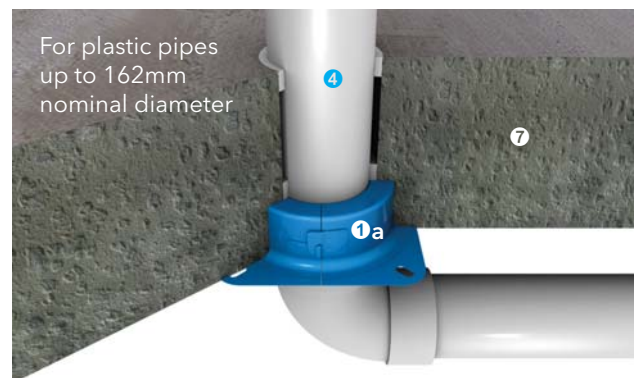
### **Other Services Penetration Seals**

#### **Retrofit installation to concrete/masonry floors (or plasterboard walls)**

Position either square or circular base PROMASEAL® Retrofit Collars (FC or FCS) around the services and fix to the underside of the slab (or to the plasterboard wall) in the same manner as fitting for plastic pipes. Then fill any gaps inside the collar caused by the orientation of the service with PROMASEAL® Grafitex. Size of services should not exceed the inside diameter of the 100mm collar. Please refer to illustrations on [page 3](#) for fixing details.

**Up to -/240/240 fire resistance in accordance with the requirements of BS 476: Part 20: 1987, AS 1530: Part 4: 2005 and/or AS 4072: Part 1: 2005; insulation criteria will vary depending on type and size of plastic pipes AND the type of penetrating elements**

- ①a PROMASEAL® Retrofit Collar (square base)
- ①b PROMASEAL® Retrofit Collar (circular base) for use on sockets
- ② Suitable fixing, i.e. steel bolt anchors for masonry/concrete floors and walls OR laminating screws for lightweight partitions
- ③ Steel channel fixed at position to the fire resistant lightweight ceilings
- ④ Various plastic piping, e.g. ABS, HDPE, uPVC
- ⑤ All gaps caulked with PROMASEAL®-A Acrylic Sealant to prevent cold smoke ingress when required
- ⑥ PROMASEAL® Mortar
- ⑦ Fire resistant concrete/masonry floors



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