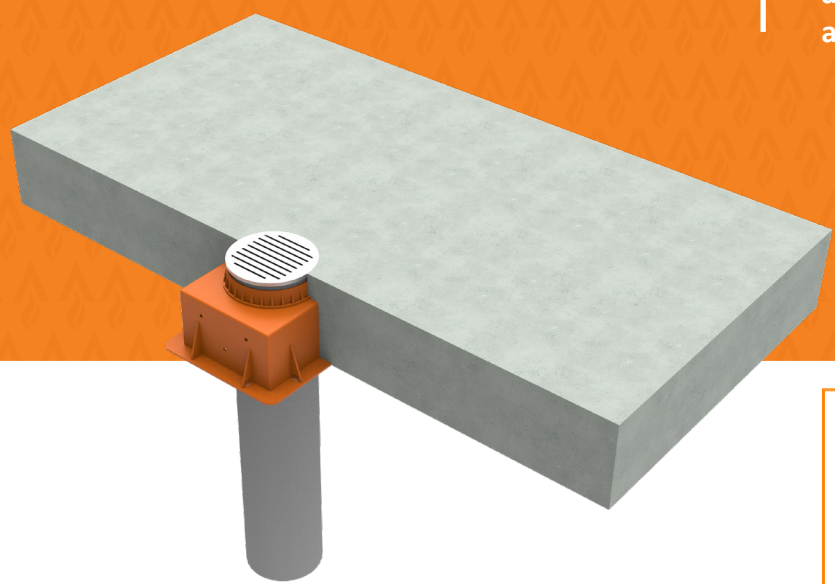


FyreCOLLAR

Floor Waste Collar

Trafalgar Fire's Australian Made FyreCOLLAR Floor Waste provide a full range of cast-in fire stopping solutions for floor waste applications, with approvals up to 4 hours across a huge range of common pipe types and sizes.



NEW FIRE TESTING - AS1530 Part 4 - 2014

- Elbows or sockets inside the fire collar body
- Acoustic insulation on plastic pipes

KEY FEATURES



- Robust Injection Moulded design
- Corrosion resistant materials
- Fire tested to AS1530.4:2014
- Tested in floor waste applications
- Tested for 4-way risers and P-trap applications
- Tested with acoustic insulation
- Simple install

APPLICATIONS



Tested to AS1530.4 for a range of common plastic floor waste pipes:

- PVC
- HDPE
- Raupiano
- DBlue

For stack pipe applications please refer to Trafalgar Fire's range of CLC and CHC cast-in fire collars.

TRADES



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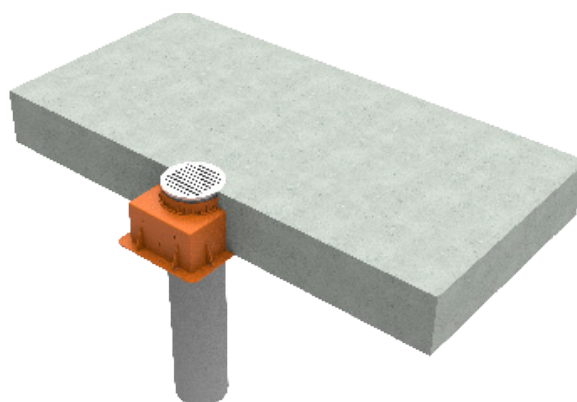
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BENEFITS - FLOOR WASTE APPLICATIONS

FyreCOLLAR FLOOR WASTE

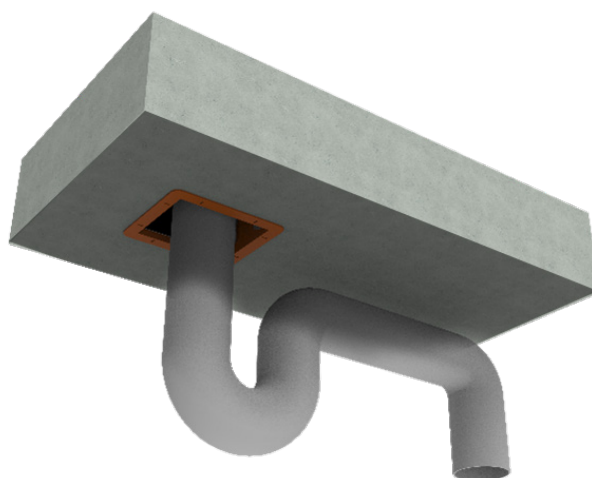
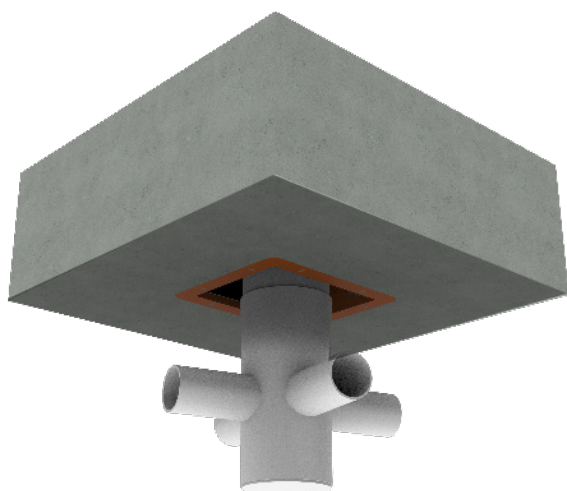
Floor waste applications are not continuous pipes, often having a metal grill finished at the floor level above. Standard intumescent collars will not close off the penetration quickly enough to prevent early fire spread!

The FyreCOLLAR Floor Waste is fitted with a spring loaded mechanical system that will shut the plastic pipe early when exposed to fire conditions, to effectively close off the penetration whilst the intumescent material swells to close off any remaining gaps, stopping the spread of fire in this unique application.



The FyreCOLLAR Floor Waste is available in high and low cast, and has been tested for a range of pipe materials connected to 4-way risers and P-traps directly underneath the slab for the following 100mm pipes:

- PVC
- HDPE
- D-Blue
- Raupiano



COMPLIANCE



COMPLIANCE WITH THE NATIONAL CONSTRUCTION CODE (NCC)

Fire testing of plastic pipes

The National Construction Code (NCC) requires all service penetrations be treated in accordance with section C3.15, which in turn calls for the entire penetration system to be fire tested identically to how it is intended to be installed on the building site, in accordance with AS1530.4:2014.

The key to this is that you are installing a system, that comprises of:

- The floor slab thickness
- The type and size of the pipe
- The connecting fittings if present
- Installed in the same configuration (i.e. stack or floor waste).

The tested system must achieve or maintain the FRL of the floor slab (separating element) that it is installed into.

It is important to note that floor waste applications require testing for this specific configuration, with all components such as puddle flanges and floor grates. Conversely, stack pipe testing is done with 2 meters of pipework installed above the slab.



ASSESSMENT REPORTS AND AS4072.1

The NCC clause C3.15 also allows for the registered testing authorities to write reports based off the AS1530.4 fire testing data that allow for small variations in accordance with AS4072.1 which has strict requirements for how much base-line data is needed before any variations can be written against plastic pipes.

Assessment reports are a handy way of summarising lots of test reports into one document for easy compliance, and the testing laboratories can allow for a range of different pipes sizes in-between the smallest and largest, if the full range of sizes has been tested with PVC pipes.

For a copy of the FyreCOLLAR Cast-In range test and assessment reports, contact Trafalgar Fire Technical Team at technical@tgroup.com.au or call 1800 888 714.

SYSTEM SELECTOR



PLUMBING APPLICATIONS IN ACCORDANCE WITH AS1530.4 - 2014

STACK
(continuous pipe) AS4072.1
Clause 4.6.1- e.g:

- Kitchen sink
- Basin
- Laundry sink
- Bath
- Toilet (pan)
- Plumbing stack

FLOOR WASTE
AS4072.1 Clause 4.6.2 - e.g:

- Trap with grille at floor level

SLABS < 250mm

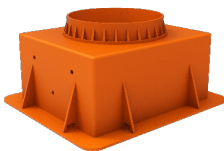
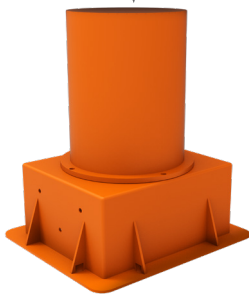
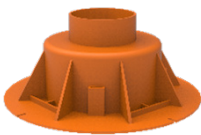
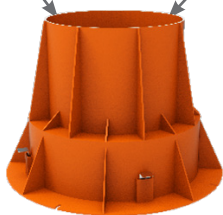
SLABS > 150mm

SLABS < 250mm

SLABS > 150mm

INSULATED COPPER PIPE

METAL & PLASTIC PIPE



CIFIC - H HIGHTOP

CIFIC - L LOW TOP

CIFW HIGH TOP

CIFW LOW TOP

Fyre COLLAR CAST-IN

Key Features

- Plastic pipes
- Socket inside fire collar
- Copper & steel pipes
- Mixed services

Fyre COLLAR FLOOR WASTE

Key Features

- P trap
- 4 way riser
- Socket inside fire collar
- Pipe material: PVC, HDPE, dB Blue Raupiano

SPECIFICATIONS



Fyre COLLAR FLOOR WASTE



Specification	Detail
Casting material	Injection molded, moisture resistant PP
Metal components/springs	Galvanised or Stainless Steel
Intumescent	High grade expansion
Rubber seal/gasket	Not required, tight fitting neck
Sizes – High Cast	To suit 100mm pipes
Sizes – Low Cast	To suit 100mm pipes
Dimensions	Refer to below technical drawings page 14-15 .

FIRE RESISTANCE LEVEL

FIRE RATING – HOW IS FIRE PERFORMANCE MEASURED?

An FRL (fire resistance level) is a handy way of summarising the performance of a building element. It consists of 3 numbers, all given in minutes:

FRL 240/240/240

(example)



Structural Adequacy

The ability of the building element to support the weight of adjacent building elements.

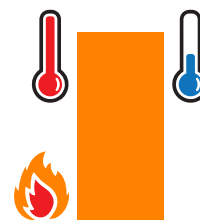
ie: a brick wall supporting a concrete floor slab above.



Integrity

The ability of an element to prevent the passage of flames and hot gasses.

ie: a plasterboard wall remaining intact and not allowing holes to form.



Insulation

The ability of an element to resist heat transfer from the exposed face to the unexposed face.

ie: a bundle of cables remaining below a set temperature limit on the unexposed side of the wall penetration system.

Penetrations are not required to have a Structural Adequacy rating and is usually expressed as a dash. For example, a penetration through a 4-hour load bearing wall would be written as -/240/240.

INTEGRITY

The FyreCOLLAR system will achieve the integrity performance for up to 4 hours physically stopping the direct spread of fire, however the insulation performance of the penetration will be limited to the type of wall being used and conductivity of the services in the penetration.

INSULATION (TEMPERATURE RISE)

Heat transfer via conduction (or heat rise) is limited through cast-in collar systems. The concrete floor slab can absorb much of the heat, and plastic pipe services are not thermally conductive, reducing heat to transfer down the length of a service penetration and do not require additional wrapping or treatment for heat rise.

FLOOR WASTE PIPES

FyreCOLLAR FLOOR WASTE



Service Types*	Nominal size (mm)	Collar	Min Slab Thickness (mm)	FRL (up to) when installed with puddle flanges and metal floor grates	
PVC/uPVC with 4-way riser/gully	100	Low-Cast FW Collar	1. Min. 150mm 2. Min. 175mm	1. -/180/180 2. -/240/240	
		High-Cast FW Collar		1. -/180/180 2. -/240/180	
PVC/uPVC with P-Trap		Low-Cast FW Collar		1. -/180/120 2. -/240/120	
		High-Cast FW Collar		1. -/180/180 2. -/240/180	
HDPE with 4-way riser/gully		Low-Cast FW Collar		1. Min. 150mm 2. Min. 175mm	1. -/180/180 2. -/240/240
HDPE with P-Trap		Low-Cast FW Collar			
Rehua Raupiano plus PP pipe with 4-way riser/gully		Low-Cast FW Collar			
DBLue pipe with 4-way riser/gully		Low-Cast FW Collar			

Acoustic insulation on the pipe can be left in place, lagging should terminate 30mm below the collar



INSTALLATION

FLOOR WASTE COLLARS

PREPARE



Fix the collar in place to the form work ensuring 50mm separation from edge to edge between each collar.

PVC FORMERS



To ensure concrete does not fill into the collars, install a pipe former to the collar that can be knocked down flush with the slab once cast.

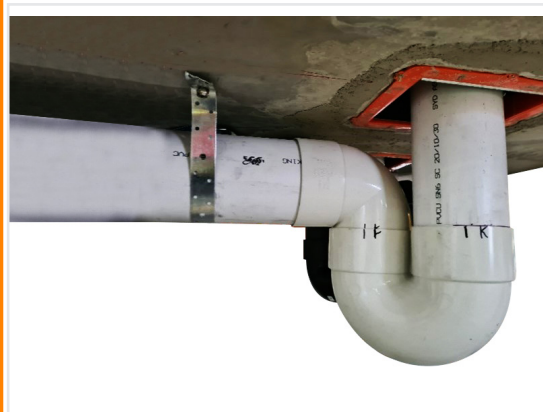
Floor Waste Collars can be supplied as a High Cast format, where there is no need to pre-install a section pipe.

POUR SLAB



Pour the concrete slab, ensuring the collars remain firmly in place. Once the slab is cured, the pipe formers can be gently tapped downwards to allow for connection of the pipe/service, ensuring it is approved for the required FRL, as listed in this manual on [page 8](#).

RUN SERVICES



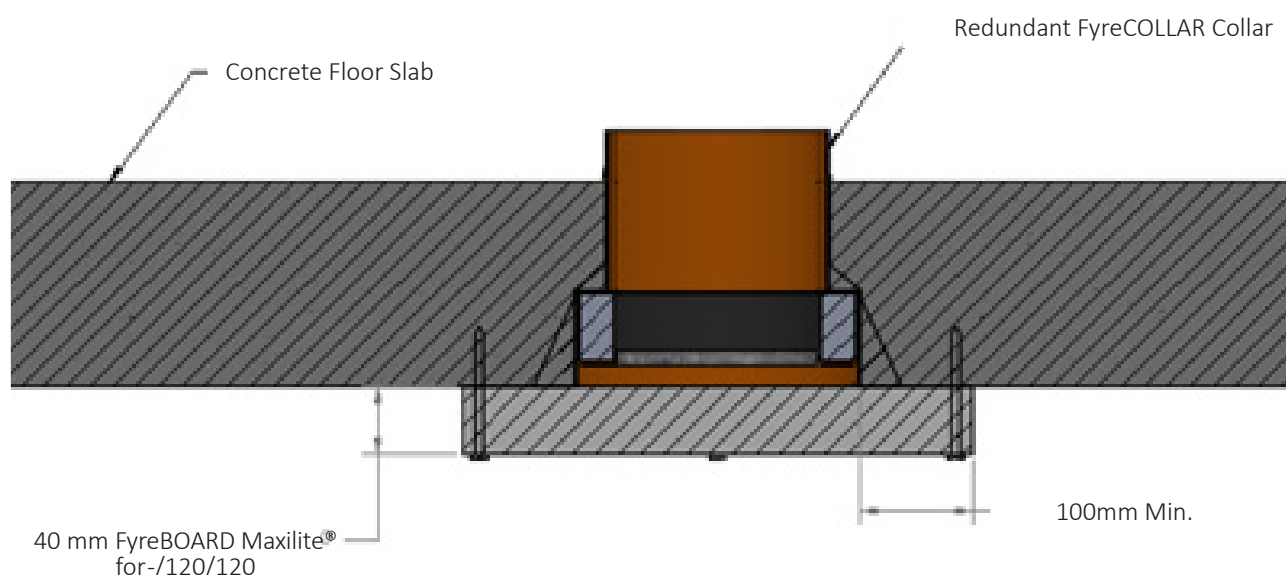
The pipe elbow or socket may be installed inside the fire collar body. Trafalgar recommends the use of a puddle flange like the Wondercap that can be retro-fit to the pipes above the slab.

FIXING INCORRECT INSTALLATIONS

It is common on site to come across services that are not approved for the collar, the wrong size for the collar, or redundant collars that don't have any service running through it. Naturally in these scenarios the FRL of the floor slab still needs to be maintained. Trafalgar Fire have a range of solutions for these instances.

1 - REDUNDANT COLLAR

For redundant collar, simply fix FyreBOARD Maxilite® to either the top or bottom side of the slab to the below specification. This method works for any size or brand of collar, as the FyreBOARD Maxilite® board blanks off the opening.



2 - WRONG SERVICE

Where a non-compliant service is installed into a cast-in fire collar, a retro-fit solution must now be put in place to maintain the FRL of the barrier. Refer to the below table for a summary of retrofit solutions for common services.

Non-Compliant Service	Retro-fit Fire Stopping	Reference
Plastic Service (incorrect size for the collar)	60mm FyreBOARD Maxilite® to the underside of the slab and a retro-fit FyreCOLLAR	FyreCOLLAR Premium Retrofit Collar Technical Manual
Electrical Cable Bundle	60mm FyreBOARD Maxilite® to the top side of the slab, FyreFLEX® Sealant and TWRAP™	FyreFLEX® Sealant Technical Manual
Copper or Steel Pipe (DN100 only)	Seal pipe with FyreFLEX® sealant on the top side (10mm backfill) and install a UniGUARD™ to the top side	UniGUARD™ Technical Manual
Copper or Steel Pipe (all other sizes)	60mm FyreBOARD Maxilite® on the top side, FyreFLEX® sealant and TWRAP™	FyreBOARD Maxilite® Technical Manual TWRAP™ Technical Manual

For any other service types, contact technical@tgroup.com.au for the best way to fire rate the penetration.

SYSTEM RANGE



100mm FyreCOLLAR CIFWC-100



Item Number	Description	Min Order Qty	Pallet QTY
FyreCOLLAR CIFWC-100	FyreCOLLAR Floor Waste 100mm	-	-
FyreCOLLAR CIFWC-H100	FyreCOLLAR Floor Waste Collar High 100mm	-	-



65mm
FyreCOLLAR
CISC-H40-65

100mm
FyreCOLLAR
CISC-H80-100

Item Number	Description	Min Order Qty	Pallet QTY
FyreCOLLAR CISC-H40-65	FyreCOLLAR Cast-In Stack High Cast Collar 40-65mm	1	-
FyreCOLLAR CISC-H80-100	FyreCOLLAR Cast-In Stack High Cast Collar 80-100mm	1	-




40mm
FyreCOLLAR
CISC-L40

50mm
FyreCOLLAR
CISC-L50

65mm
FyreCOLLAR
CISC-L65

80mm
FyreCOLLAR
CISC-L80

100mm
FyreCOLLAR
CISC-L100

Item Number	Description	Min Order Qty	Pallet QTY
FyreCOLLAR CISC-L40	FyreCOLLAR Cast-In Stack Low Cast Collar 40mm	1	-
FyreCOLLAR CISC-L50	FyreCOLLAR Cast-In Stack Low Cast Collar 50mm	1	-
FyreCOLLAR CISC-L65	FyreCOLLAR Cast-In Stack Low Cast Collar 65mm	1	-
FyreCOLLAR CISC-L80	FyreCOLLAR Cast-In Stack Low Cast Collar 80mm	1	-
FyreCOLLAR CISC-L100	FyreCOLLAR Cast-In Stack Low Cast Collar 100mm	1	-

FAQ

Q Can I backfill a redundant (un-used) Cast-in Collar with concrete to maintain the FRL?

A No, this runs the risk of the collar plastic melting in a fire and the back-filled concrete slipping out. [FyreBOARD Maxilite®](#) can be used, refer to [page 11](#).

Q Can I use a bigger collar for a smaller pipe?

A The pipe must be the correct size per the approvals tables in this manual, if you have already run a smaller pipe than what is approved, refer to [page 11](#).

Q Why would you use low cast over a high cast collar, or vice versa?

A The advantage of the high-cast collar is that no pipe formers need to be used when pouring the slab. This is required for the low-cast collar however it is sometimes preferable to use a low-profile collar.

Q How far apart do the cast-in collars have to be? Can I overlap the flanges?

A The flange of the collar can be butt up against the next but not overlapping.

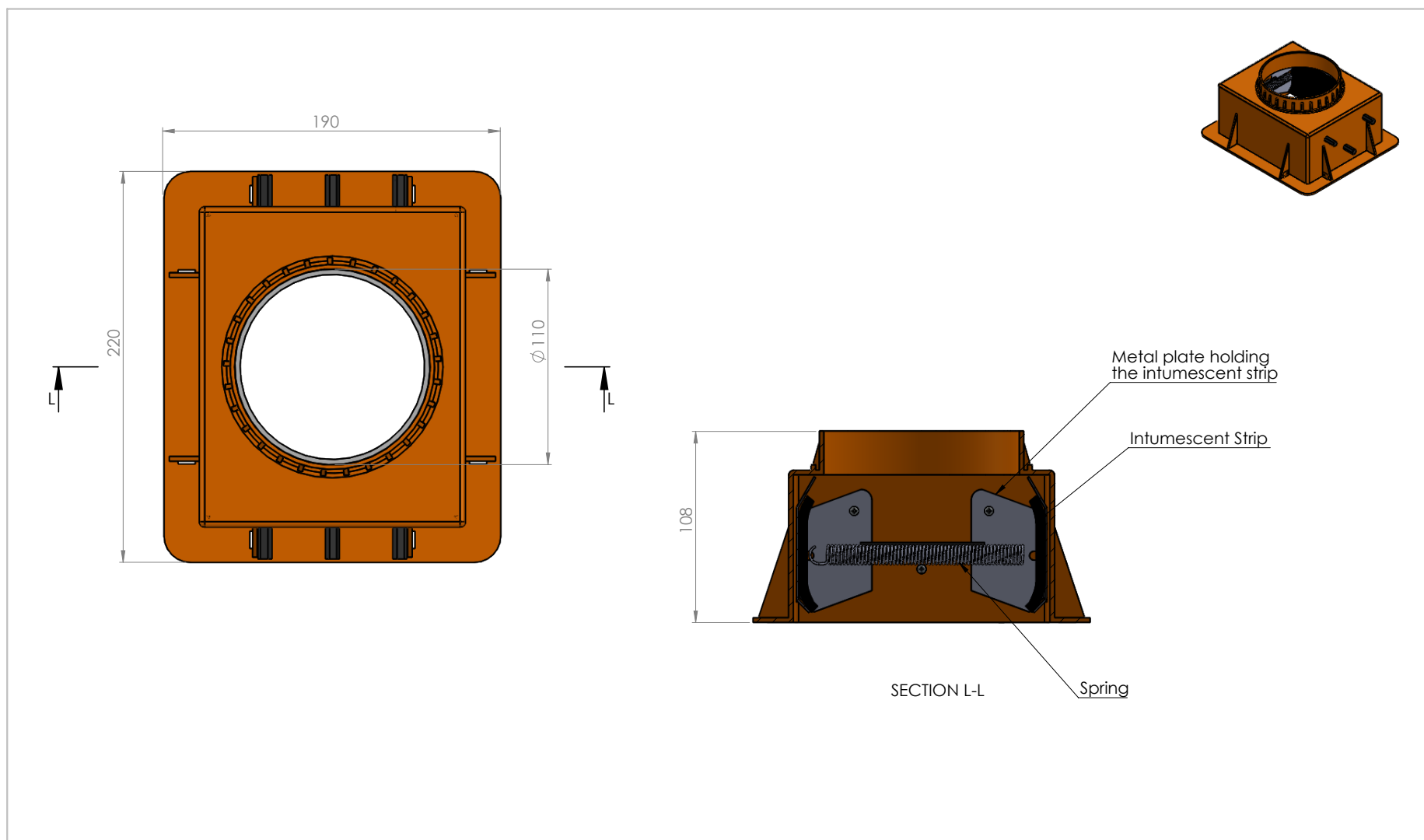
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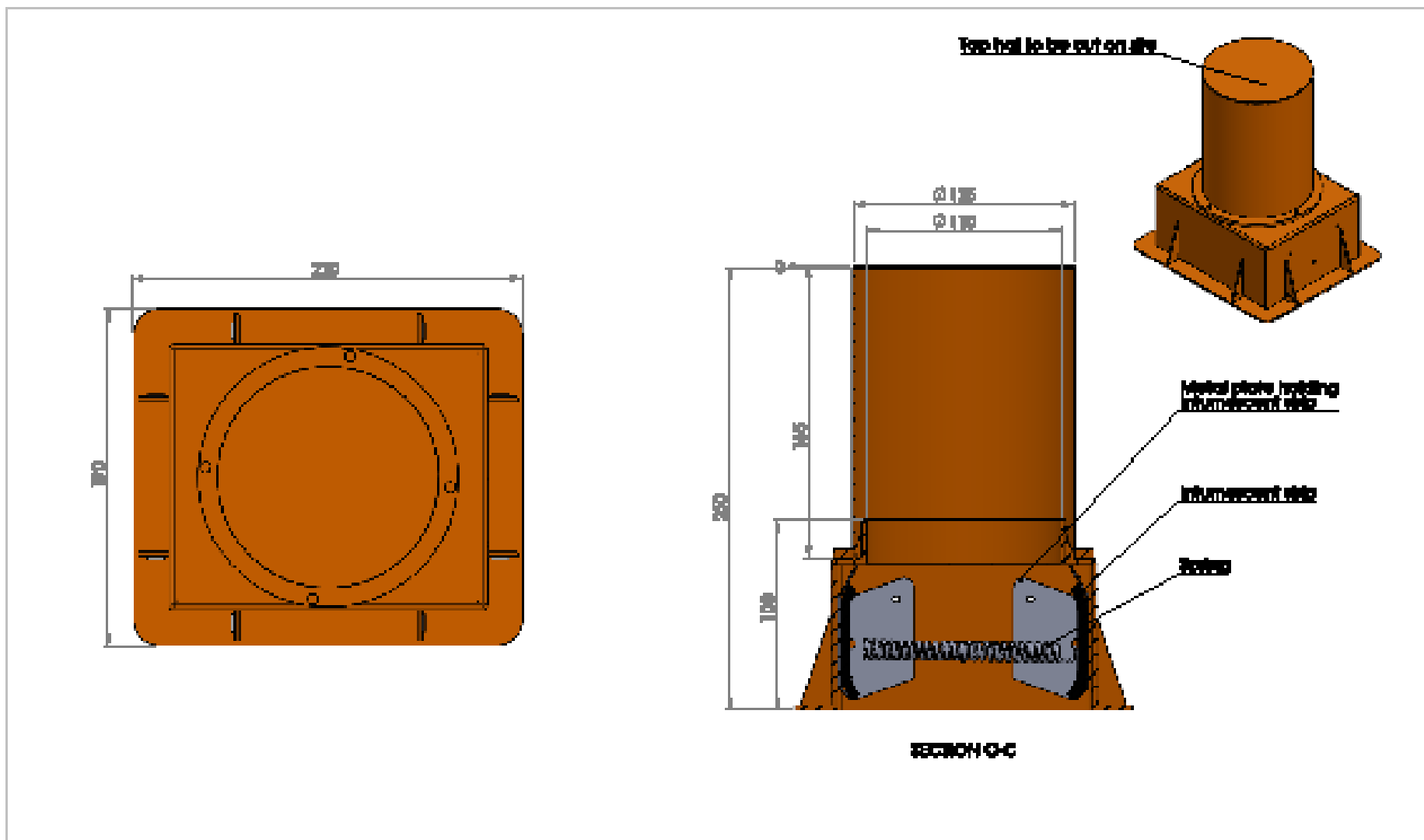
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 YouTube

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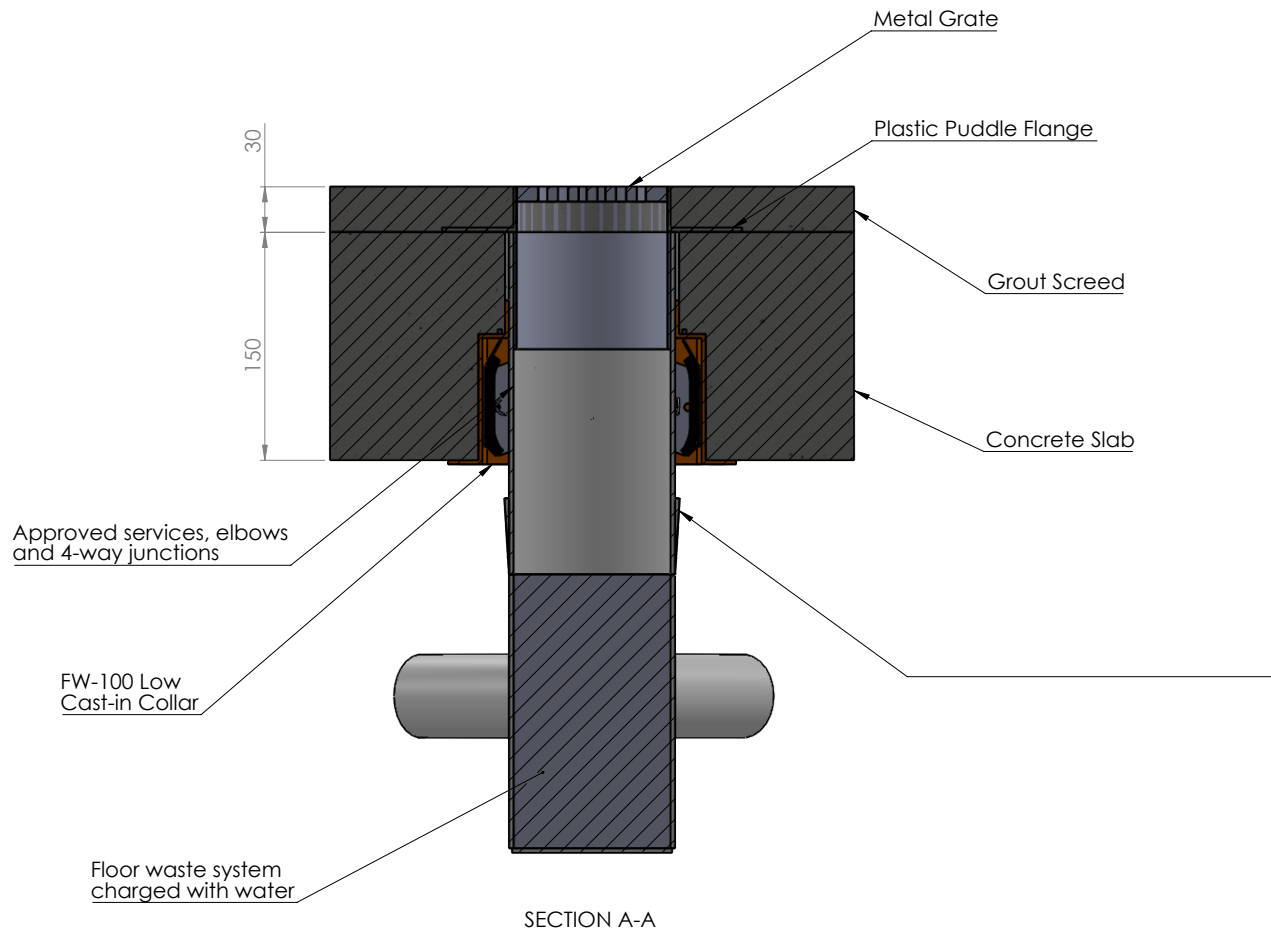


Drawing Name: FW 100 Low Cast-in Collar				Test Standard: AS1530.4	Codes:	Revision:	Date:	No.:	NOTICE:
Project Title: FyreCOLLAR Floor Waste				Fire resistance level:	Drawn By: RK	<small>NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm)</small>  TRAFALGAR FIRE <small>Trafalgar Head Office: PO BOX 545 Chester Hill NSW 2162 T: 1800 888 714 F: 1800 201 500 E: technical@tgroup.com.au W: www.tfire.com.au</small>			
Drawing No. : 1	Sheet: 1 of 2	Date: 14/07/2021	Scale: NTS	Based on Report No.:	Checked By: JH				



Drawing Name: FW 100 High Cast-in collar				Test Number: A11088.4	Codes:	Revisions:	Date:	Proj:	NOICE
Project Title: FyreCOLLAR Floor Waste				FW MANHOLE NAME	Drawn by: JA				
Drawing No. : 1	Sheet: 1 of 1	Date: 13/06/2021	Scale: N/E	Based on Report No:	Checked by: JA	<input type="checkbox"/> STANDARD DRAWING <input type="checkbox"/> PROJECT DRAWING			

Click here to go back to Contents



Drawing Name: Typical Installation

Project Title: FyreCOLLAR Floor Waste

Drawing No. : 2	Sheet: 2 of 2	Date: 14/07/2021	Scale: NTS
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Test Standard:
AS1530.4

Fire resistance level:

Based on Report No.:

Codes:

Drawn By:
RK

Checked By:
JH

Revision:

STANDARD DRAWING
 PROJECT DRAWING



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NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm).