

# Downlight Fire Hood

Tenmat's Downlight Fire Hoods (DFH) are designed to reinstate the fire resistance performance of ceilings and/or floor joist constructions where downlighters have been installed.

## Product Description

Tenmat's Downlight Fire Hoods (DFH) are manufactured from low smoke zero halogen intumescent material and are designed to reinstate the fire and acoustic performance of ceiling/floor constructions when penetrated by downlighters. The DFH is made from an intumescent flexible mineral wool material allowing it to be installed through the hole cut into the ceiling membrane, before springing back into shape to cover the light fitting, whilst allowing enough space between the hood and the light fitting to allow for normal operation of the light fitting.

The DFH also includes small ventilation holes, which allows hotter operating downlighters to ventilate, a small pre-cut hole for the light fitting cable to pass through and a steel clip to hold the hood in place. In the event of a fire the DFH intumescent material will expand to enclose the ceiling cutout, cable and vent holes, providing effective fire resistance for integrity and insulation for 30 or 60 minutes depending upon the ceiling and floor joist construction.



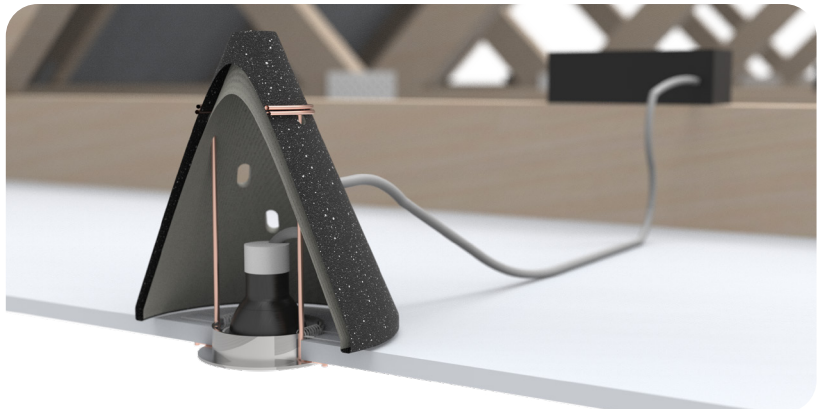
## Product Details

### Technical

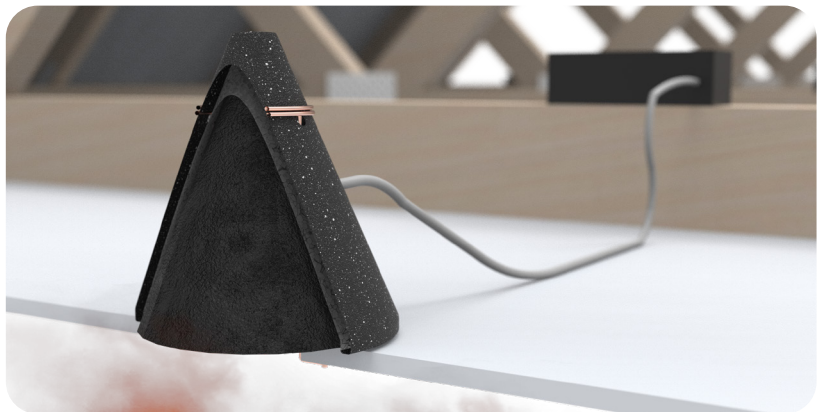
- A fire rated product, reinstating ceiling fire protection up to 60 minutes
- Tested for minimal acoustic noise transfer, ideal for multi-home buildings
- Ventilated design – developed to reduce heat build-up within the fire hood
- Suitable for halogen and LED's – available in 3 sizes: 150 x 150 mm, 200 x 200 mm, 250 x 250 mm

### Installation and maintenance

- Flexible and lightweight – designed to be easily and quickly installed from below ceilings with no special tools required
- Compatible with new and retrofit solutions – does not need to be removed when changing light fittings
- No maintenance required after installation



*Downlight Fire Hood provides a fire protection barrier behind the downlight which limits fire spread from below passing into the ceiling space.*



*Intumescent material expands when exposed to heat, which limits fire spread.*

## Approved Applications - Australia/New Zealand

Australia and New Zealand Fire Performance in accordance with AS 1530.4 and assessed by (FAR 2032)

Floor Joist Construction Type With Appropriate 60 minutes (FRL) Fire Rating	Ceiling Construction Type With Appropriate 60 minutes (FRL) Fire Rating	Product Selector			Product Fire Resistance Rating			Tested System Reports
		Cut Out Size Range Diameter (Ø in mm )						
		50 -75	76 - 100	101 - 140				
		Product Dimensions (Outside Width x Height, in mm)						
		150 x 150	200 x 200	250 x 250	Stability	Integrity	Insulation	
Joisted floors with flooring above	Plasterboard	Yes	Yes	Yes	60	60	60	BRANZ FAR 2032
Under roofs with no floor above	Plasterboard	Yes	Yes	Yes	60	60	60	

The Downlighter Covers would help to maintain fire resistance performance of previously tested or assessed timber floor/ceiling systems with plasterboard linings in accordance with AS1530.4 for at least:

- 60 minutes Stability, Integrity, Insulation
- FRL = (60)/60/60
- 60 minutes Incipient Spread of Fire

This would also apply to roof/ceiling systems, steel joist systems and where concrete floors are part of the construction. Assessment based on floor ceiling systems having been demonstrated by test to AS1530.4 that they can satisfy the criteria for at least 30 or 60 minutes as appropriate to the floor/ceiling type.

Downlights must be essentially of steel or aluminium construction.

There must be no more than one downlight for each 0.7 m<sup>2</sup> of ceiling area.

The ceiling system must also have been shown by test to be suitable for use in a fire rated ceiling/floor system.

*The fire reports referenced above are undertaken by independent and accredited test houses, the periods of fire resistance indicated within the charts are as detailed within the referenced reports\* and are dependant upon the particular methods of construction being undertaken to reflect those as tested or as approved within the as tested standard. \* Periods of fire resistance are lowered to the nearest National requirements, for example 55 minutes is lowered to 30 minutes or 75 minutes is lowered to 60 minutes. Technical data or certification is provided by Tenmat for reference and is no guarantee that the whole building or construction project will achieve building control approval. This relies upon all building elements, and not just approved Tenmat products.*

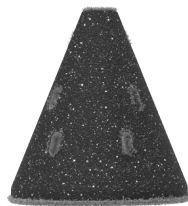
## Technical Data

Material Property	DFH-150	DFH-200	DFH-250
<b>Physical Properties</b>			
Colour	Black	Black	Black
Material	FF109	FF109	FF109
Thickness - All Tolerances to +2mm/-1mm	8 mm	8 mm	8 mm
Outside Diameter	150 mm	200 mm	250 mm
Height	150 mm	200 mm	250 mm
Weight	0.13 kg	0.14 kg	0.18 kg
Transportation, storage and installation conditions	Product should be kept in dry ambient conditions		
Application temperature	Working life is based on the product being installed in ambient conditions at room temperature (23 °C)		
Cuttability	Product must not be modified as doing so will invalidate the fire protection performance		
Compress ability	Product should not be squashed or compressed other than as per the installation instructions		
<b>Construction Type for Application</b>	Construction types must be suitably tested to achieve the fire performance required		
Maximum aperture	50 -75 mm	76 - 100 mm	101 - 140 mm
LED lamp Wattage, in relation to heat output	Max. 35 Watts	Max. 35 Watts	Max. 35 Watts
Halogen Lamp Wattage, in relation to heat output	Max. 50 Watts	Max. 50 Watts	Max. 50 Watts
<b>Product Performance</b>			
Smoke/Halogen Content	Low Smoke / Zero Halogen	Low Smoke / Zero Halogen	Low Smoke / Zero Halogen
Acoustic measurement as per BS EN ISO 140 part 3 & 6 and calculated to BS EN ISO 717 part 1 & 2	Rw = 65db (when fitted within floor constructions of 86kg/m <sup>2</sup> ) Rw = 42db (when fitted within floor constructions of 34kg/m <sup>2</sup> )		
Density	200 kg/m <sup>3</sup>	200 kg/m <sup>3</sup>	200 kg/m <sup>3</sup>
Free Expansion (Ratio : 1) (@ 450 °C, 15 mins)	5:1	5:1	5:1
Activation Temperature	180 °C	180 °C	180 °C
Thermal conductivity (λ) ISO 8301:1991 and BS EN 12667: 2001	0.0343	0.0343	0.0343

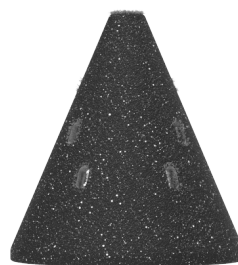
DFH Tenmat product must be installed into a construction that matches the corresponding test report. DFH Tenmat product performance requires safe and proper handling and correct installation. For construction projects, all products which the customer is intending to use on a particular project must be approved in writing by the customer's building designer, system designer, design control professional or authorities having jurisdiction, to ensure compliance with the latest regulations. Tenmat can provide the relevant fire test evidence on request.

## Sizes

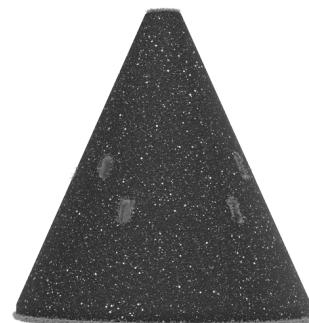
Refer back to Technical Data



150x150mm



200x200mm



250x250mm

## Packaging

Description	Units Per Box	Pallet	Container	Item Number	
DFH-150	500	2,000	46,000	I109MC01000150015000	Bagged
DFH-150	600	2,400	55,200	I109MC01000150015001	Bulk
DFH-150	50	1,000	20,000	I109MC01000150015004	50's

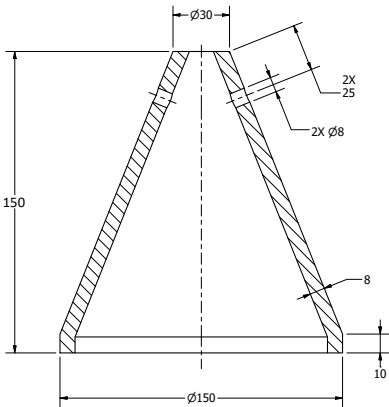
DFH-200	250	1,000	23,000	I109MC01000200020000	Bagged
DFH-200	250	1,000	23,000	I109MC01000200020001	Bulk
DFH-200	20	400	8,000	I109MC01000200020003	20's

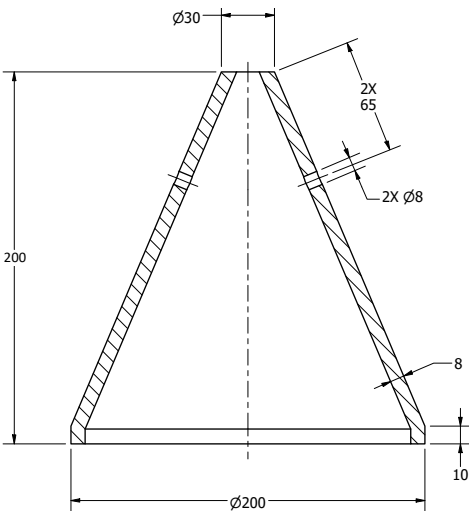
DFH-250	200	800	18,400	I109MC01000250025000	Bagged
DFH-250	200	800	18,400	I109MC01000250025001	Bulk
DFH-250	10	200	4,000	I109MC01000250025002	10's

Overall Dimensions

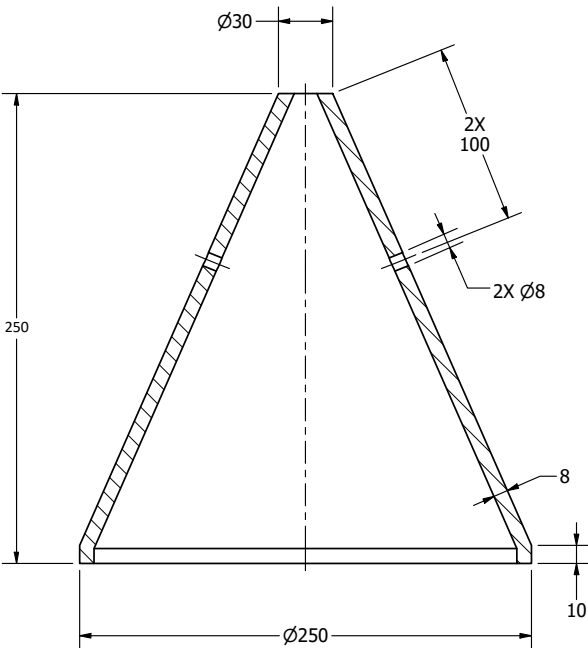
150x150mm



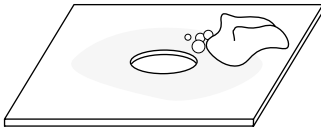
200x200mm



250x250mm

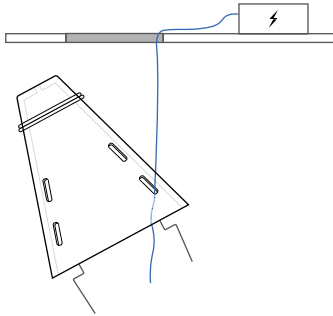


## Fitting Instructions



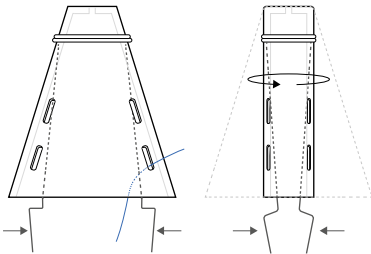
### Stage 1

Using a damp cloth, clean the surface of the ceiling / tile (within the ceiling void / rear side of the tile) to remove any dust or debris within the void.



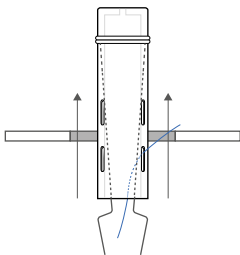
### Stage 2

Ensure that power cable to the downlighter is passed through one of the lowest vent holes ensuring that the transformer is placed within ceiling void, and not within firehood.



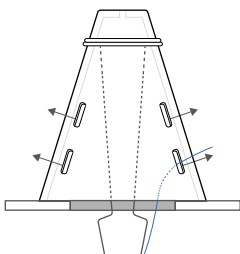
### Stage 3

Grasp legs firmly and roll hood into a tight cylinder. Ensure downlight cable is through one of the lower slots before installation.



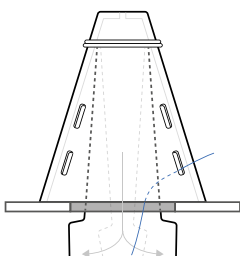
### Stage 4

Keeping a tight grip on the legs, feed the hood through the cut out made for the downlighter.



### Stage 5

Ensure hood has sprung back into its original cone shape, this may require you to insert your hand into the hood to push it back into it's original cone shape.

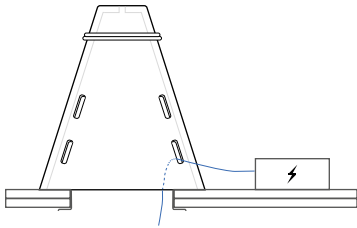


### Stage 6

Grasp legs and pull down until L section, of the legs, clears the underside of the ceiling surface / tile.

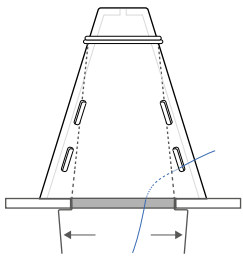


## Fitting Instructions (part 2)



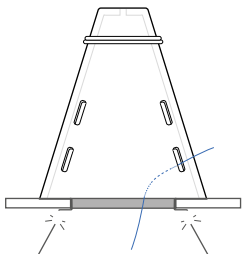
### Stage 6 (for thicker ceiling / tile)

Where the ceiling surface / tile thickness is greater than 15mm ie is double layered then pull firmly down on the legs until L section of legs clears the underside of the ceiling surface / tile.



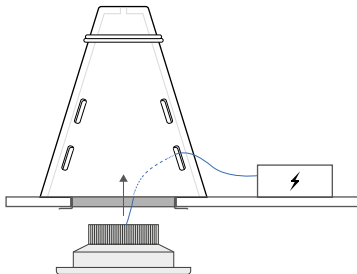
### Stage 7

Move legs out until vertical part of L section is flush with the outside of the cut out, release the legs so they grip the underside of the ceiling surface / tile.



### Stage 8

Remove, by cutting, the excess of both legs (where it protrudes lower than ceiling surface / tile) with wire cutters / pliers.



### Stage 9

Once hood is in place, downlighter can be fitted as normal, with the transformer outside the cover.

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## Storage & Durability

Storage	Dry, ambient
Transportation storage temperature	-20°C to +70°C
Working Life	48 years
Smoke/Halogen Content	Low Smoke / Zero Halogen

## Tools

### PPE AND TOOLS REQUIRED FOR INSTALLATION

- Hand and eye protection, to protect from ceiling dust and wire cutting
- Damp cloth to clean surface of ceiling within ceiling void
- Wire cutters to cut steel wire legs (retaining clip)

## Intended Use

Internally used within ceiling voids fitted over recessed downlighters to restate fire resistance performance.

## Scope

The FF109 DFH demonstrates functional compliance for various National Building Codes & Regulations including Approved Document B for England & Wales, Building (Scotland) Regulations 2004 and NZ Building Code Clause C3: Fire affecting areas beyond the source.

## Limitations

To ensure compliance to the relevant test evidence detailed within this Data Sheet, the DFH must be installed as per the fitting instructions by competent installers.

The product is not subject to any warning or ban under Section 26 of the NZ Building Act 2004.

## Maintenance

No active maintenance required, where alterations are made around the product such as changing installed light fitting or transformer the Downlight Fire Hood, DFH, should be checked visually to ensure that the product is still installed as per the approved tested systems.

## Notes

# DFH

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