

## **FIRESTOP DUCT WRAP-38 Fire Stopping Systems**

### **Fire Protection of all Rectangular or Circular Ducts - Internal or External Fire**

#### **Overview**

FIRESTOP Duct Wrap-38 will protect horizontal or vertical rectangular or circular ducts from internal fire (grease ducts) or external fire (air ducts) for up to 120 minutes by wrapping the ducts in one or two layers of wrap. The table on page 4 sets out the requirements for particular scenarios. In all cases the following applies:

#### **Ducts:**

All ducts should be constructed to NZ standard AS4254.2-2012, min pressure class 500. The duct support system should comply with AS4254.2-2012 with supports up to 1.8m apart, provided that each section of the duct has separate support. The duct should not provide any structural support where it penetrates a wall or floor.

#### **Wrap Fixing:**

Pins may be used on any duct. Straps may be used on some smaller ducts as set out below. Each wrap layer must be pinned or strapped separately. Straps used to secure wrap prior to pinning may be left in place.

#### **FIRESTOP Insulated Weld Pins - (Internal or External Fire Protection):**

All wrap protecting ducts from external fire must be pinned, regardless of duct size. All wrap protecting ducts over a certain size from internal fire must be pinned (see below). Pins must be fixed at nominal 200mm centres around all joints and at nominal 200mm centres elsewhere along the duct. Pins should be nominal 3mm OD needle size (or greater) and length at least 80% of the wrap thickness.



#### **FIRESTOP Stainless Steel Straps - (Internal Fire Protection Only - Limited Sizes):**

Straps must be fixed 50mm from the end of each wrap (i.e. centre of each joint) and at nominal 300mm centres along the duct.

#### **Duct size limits for strapping only:**

Rectangular Horizontal - max 800 x 800mm Rectangular Vertical - max 300 x 300mm Circular (Hor or Vert) - max 300mm diameter

#### **Tape:**

All joints should be taped and all cut ends of wrap must be taped (no open wrap showing). For all systems requiring an insulation rating FIRESTOP Foil Tape should be used. This tape is of the required construction (min 50µm thick with no reinforcing) and has the required adhesive rating (min 120 deg C heat resistance). If an insulation rating is not required then any tape may be used.

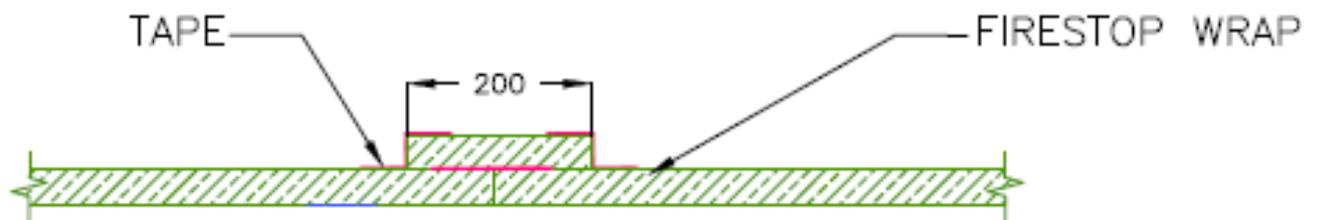
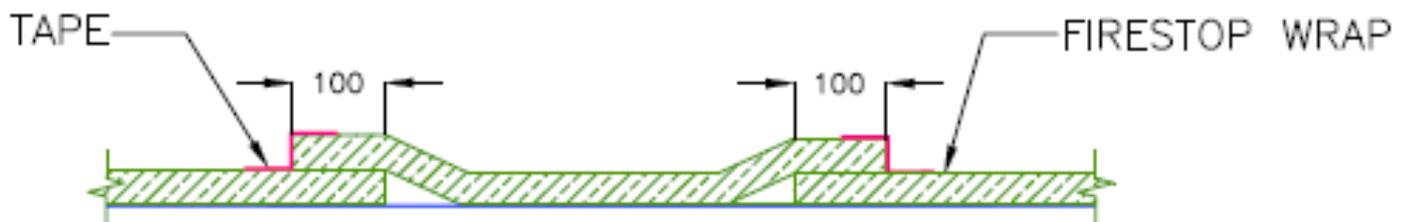
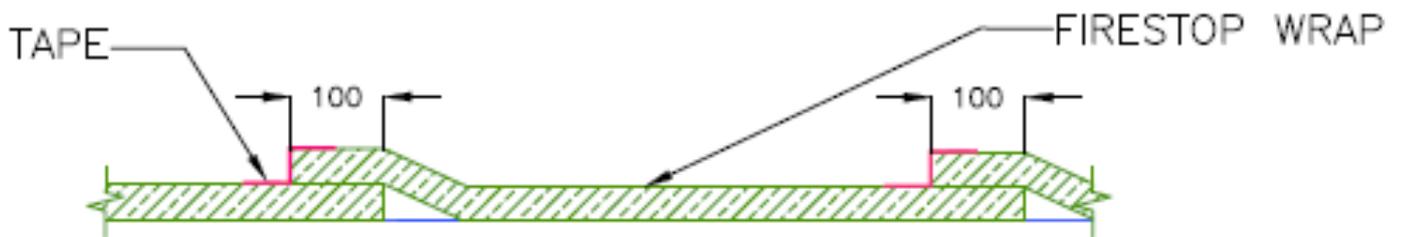
#### **Wrap Joints:**

All wrap joints (both longitudinal and transverse) must be of one of the types shown below. Butt joints without a collar are not permitted, even under a second layer. Tape all joints. Longitudinal joints should be staggered by at least 200mm and be 200mm from the duct edge. Where a second layer is applied, the transverse joints should be staggered by at least 200mm.

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### **Wrap Joints:**



### **Wall / Floor Penetration:**

Where a duct penetrates a non fire-rated wall or floor the duct wrapping should continue without interruption through the wall or floor. Where a duct penetrates a fire-rated wall or floor there are special penetration details which must be followed. These often require a second layer of wrap at the penetration and are set out in detail in the system pages shown on the Firestop Centre website.

### **Access Hatches:**

FIRESTOP Duct Hatches have been specifically designed and tested to be installed in rectangular or circular ducts protected with FIRESTOP Duct Wrap-38. These hatches come in a variety of sizes and are simple to install. For further information go to FIRESTOP Duct Hatches on the Firestop Centre website.



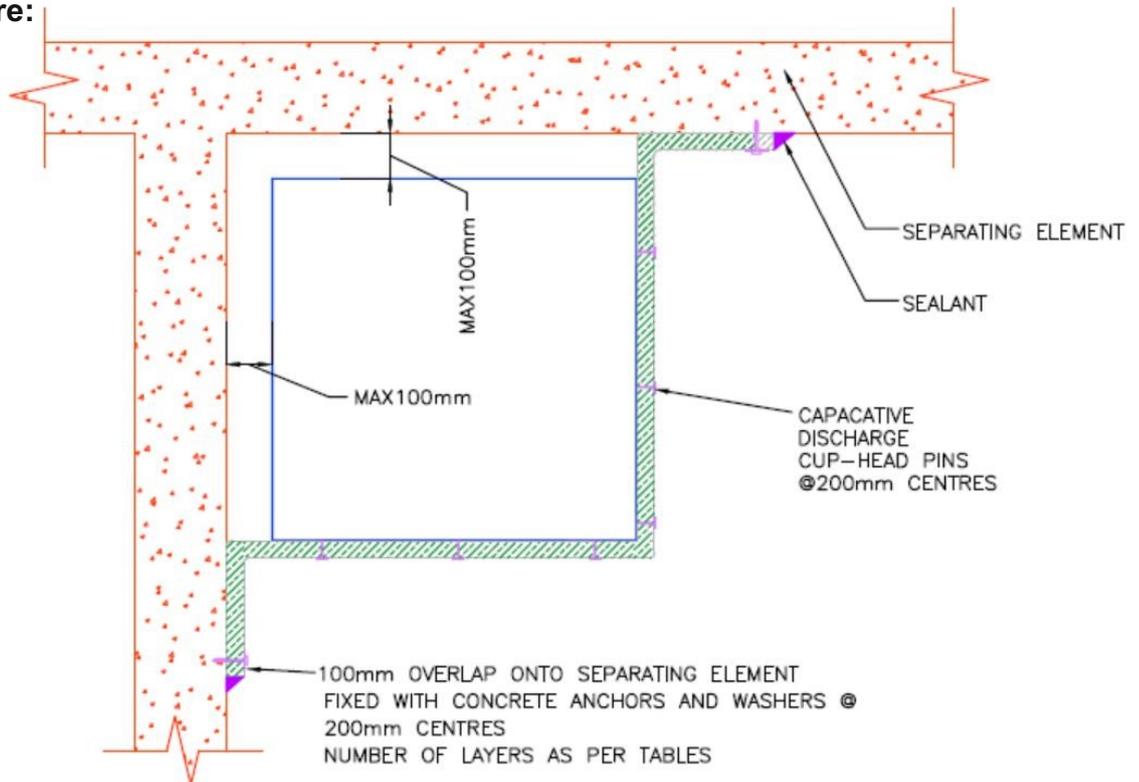
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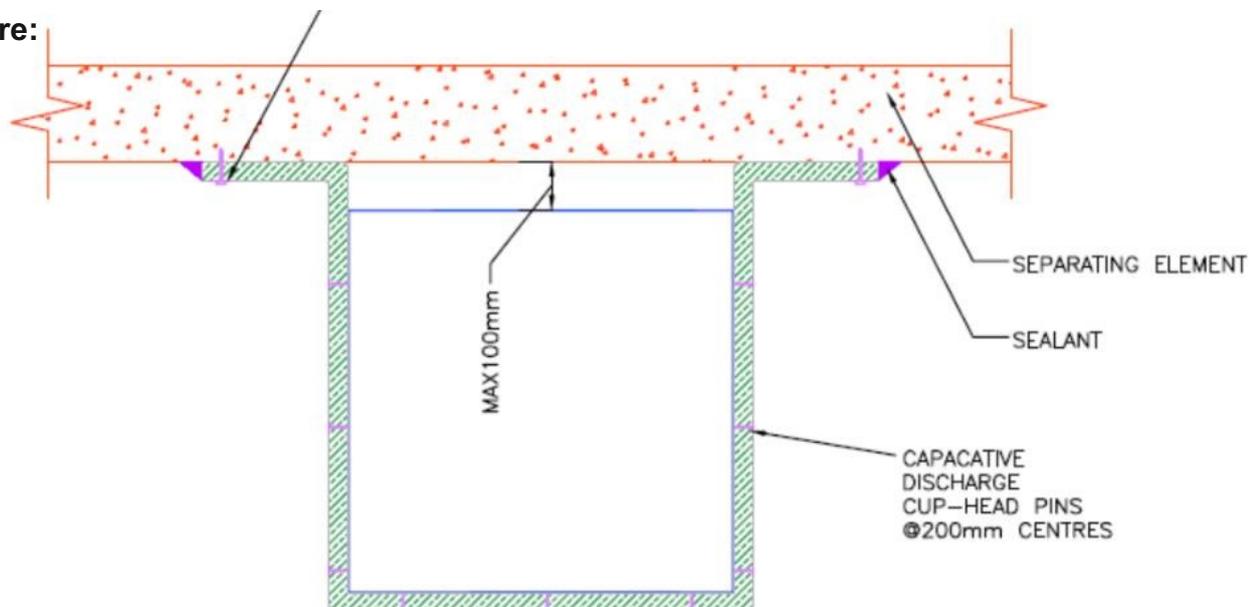
#### Options for 2 or 3-Sided Exposures:

Rectangular ducts should, where possible, be wrapped on all four sides. Sometimes ducts are installed close to walls or floors making installation of wraps difficult. Provided the wall or floor is fire-rated and the gap is no more than 100mm the following systems may be used for rectangular ducts for both internal and external fire conditions;

#### 2-Sided Exposure:



#### 3-Sided Exposure:



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### Fire Protection of all Rectangular or Circular Ducts - Internal or External Fire

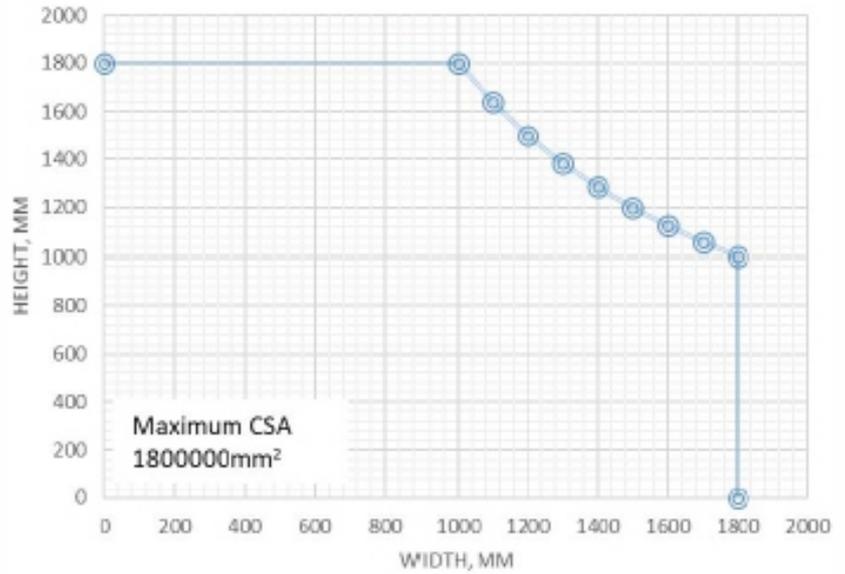
#### Duct Sizes:

The summary of systems on the next page applies to all ducts of the following sizes:

**Circular Ducts** - All ducts up to 1000mm diameter.

**Rectangular Ducts** - All ducts up to 1800mm x 1000mm or equivalent cross-sectional area. See graph for maximum permitted sizes.

Rectangular Duct Sizes



#### DUCT SIZES:

Duct Type & Max Size (mm)	Orientation	Fire Type	Wrap Layers	Fire Rating (Minutes)	Insulation Rating (Minutes)
Any rectangular duct up to 1800mm x 1000mm or equivalent area	Vertical	Internal	1	120	120
	Horizontal	Internal	1	120	120
	Vertical	External	1	60	30
	Horizontal	External	1	60	30
	Vertical	External	2	120	120
	Horizontal	External	2	120	120
Any circular duct with diameter up to 1000mm	Vertical	Internal	1	120	120
	Horizontal	Internal	1	120	120
	Vertical	External	1	60	30
	Horizontal	External	1	60	30
	Vertical	External	2	120	90
	Horizontal	External	2	120	90

