

3M™ Fire Barrier Duct-Wrap 615+ Multi-Layer System Installation Guide

General Installation techniques

The first layer of 3M™ Fire Barrier Duct Wrap 615+ blanket is wrapped around the perimeter of the duct and is cut to a length to either butt to itself or overlap itself not less than 3" (75 mm). The interface between adjacent blankets forms the "longitudinal" joint. Inner layer longitudinal joints can be tightly butted joints or they should overlap onto adjacent blankets with a min. 3" (75mm) overlap. Aluminium foil or FSK tape is used to seal all cut edges of the blanket and any tears in the foil scrim. This first layer is temporarily held in place using filament tape. The first layer does not require steel banding.

The second layer of 3M™ Fire Barrier Duct Wrap 615+ is wrapped around the perimeter of the previously installed first layer of 3M™ Fire Barrier Duct Wrap 615+. The outer layer perimeter (lateral) joints should be offset a minimum 3" (75mm) from the inner layer perimeter joints. The perimeter joints should be a minimum 3" (75mm) overlap.

Offset the outer layer longitudinal joints a minimum 10.5" (270 mm) from the inner layer longitudinal joints. The outer layer longitudinal joints should be a minimum 3" (75mm) overlap. The one exception to this rule is the "Butt Joint with Collar Method" where it is permissible for the longitudinal joints to be tightly butted and then covered with a minimum 6" wide collar centred over it. These are available pre-made (3M™ Fire Barrier Duct Wrap 615+ Collar).

The outer layer of wrap can be temporarily held in place using filament tape. **The 3M™ Fire Barrier Duct Wrap 615+ outer layer requires permanent fastening with stainless (or carbon) steel banding, or with rows of weld pins (impaling or cup head style) over the outer layer of Wrap.**

This guide provides the general procedures for installing 3M Duct Wrap. For more detail, refer to current approvals for Internal & External Exposure at www.3M.com.au/fireprotection.

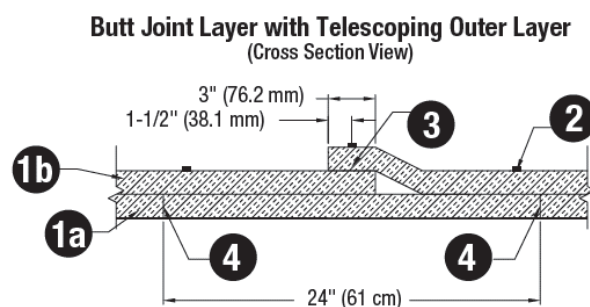


There are 4 methods for installation of 2 Layer 3M™ Fire Barrier Duct Wrap 615+ :

Butt Joint Inner Layer with Telescoping Outer Layer

With the Butt-Joint Inner Layer and Telescoping Outer Layer technique, the inner layer of blankets about the adjacent pieces of blanket. The outer layer blankets each overlap one adjacent blanket, and then the exposed edge is covered by the next blanket as shown adjacent.

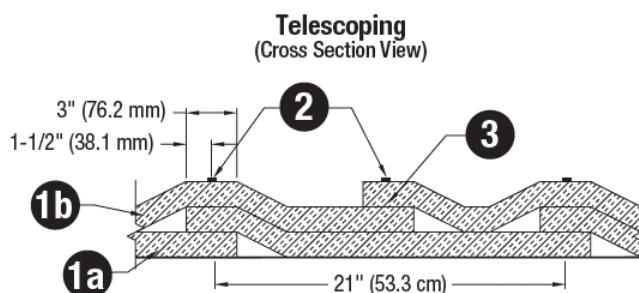
- 1a. First layer of 3M™ Fire Barrier Duct Wrap 615+
- 1b. Second layer of 3M™ Fire Barrier Duct Wrap 615+
2. Steel banding 1/2" (12.7mm) wide min. typical
3. 3" (75mm) min. longitudinal overlap
4. Tightly butted joint



Telescoping 3" (75mm) Overlap Wrap

With the Telescoping Overlap Wrap method, each blanket overlaps one adjacent blanket, and each blanket has one edge exposed and one edge covered by the next blanket

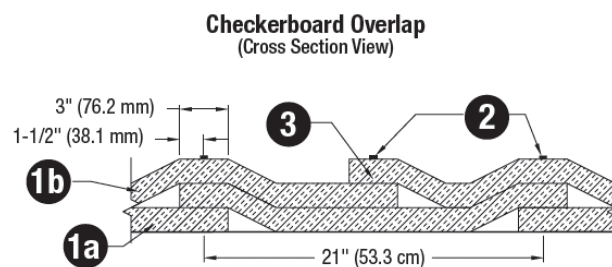
- 1a. First layer of 3M™ Fire Barrier Duct Wrap 615+
- 1b. Second layer of 3M™ Fire Barrier Duct Wrap 615+
2. Steel banding 1/2" (12.7mm) wide min. typical
3. 3" (75mm) min. longitudinal overlap



Checkerboard 3" (75mm) Overlap Wrap

With the 3" (75mm) Checkerboard Overlap Wrap method, blankets with both edges exposed alternate with blankets with covered edges.

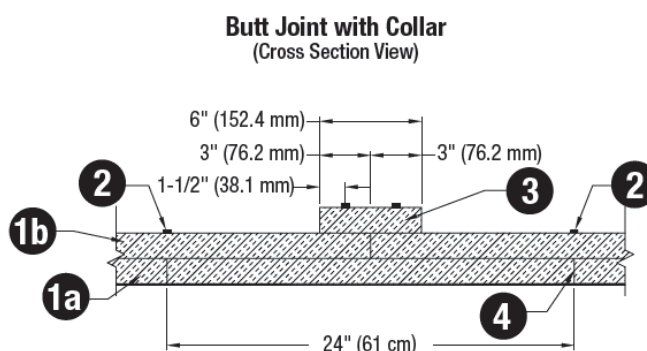
- 1a. First layer of 3M™ Fire Barrier Duct Wrap 615+
- 1b. Second layer of 3M™ Fire Barrier Duct Wrap 615+
2. Steel banding 1/2" (12.7mm) wide min. typical
3. 3" (75mm) min. longitudinal overlap



Butt Joint with Collar

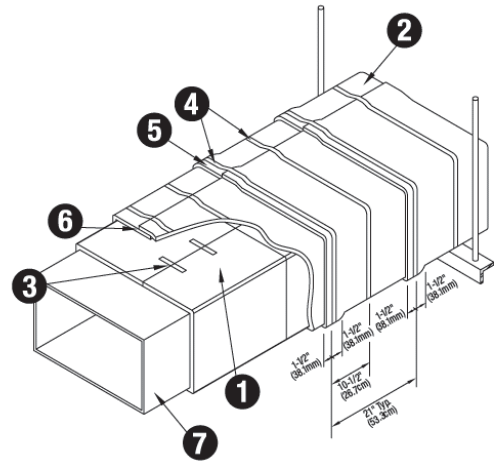
With the Butt Joint and Collar method, adjacent blankets are butted tightly together and 6" (152.4mm) wide collar of duct wrap is centered over the joint, overlapping each blanket by 3" (75mm) minimum as shown in Figure 2D.

- 1a. First layer of 3M™ Fire Barrier Duct Wrap 615+
- 1b. Second layer of 3M™ Fire Barrier Duct Wrap 615+
2. Steel banding 1/2" (12.7mm) wide min. typical
3. 6" (152.4mm) min. wide 3M™ Fire Barrier Duct Wrap 615+ Collar
4. Tightly butted joint



Multi Layer Wrap systems Overview

1. First layer 3M™ Fire Barrier Duct Wrap 615+
2. Second layer 3M™ Fire Barrier Duct Wrap 615+
3. 3/4" (19mm) wide filament tape
4. Steel banding 1/2" (12.7mm) wide min. typical for permanent fastening
5. Longitudinal joint butt or min. 3" (75mm) overlap on inner layer, min. 3" (75mm) overlap on outer layer
6. Perimeter (lateral) joint butt or min. 3" overlap (75mm) on inner layer, min. 3" (75mm) overlap on outer layer
7. Metallic commercial cooking exhaust duct



Note: System integrity is limited by quality of installation. Ducts ≥ 609 cm wide require pinning on the bottom side of horizontal ducts and on a minimum of one of the wider sides of a vertical duct. Vertical ducts >1200 mm require pinning on all sides .

3M™ Fire Barrier Duct Wrap 615+ Pinning

Additional pinning is required to prevent sagging of the duct wrap. Please refer to pinning & banding guidelines in each approval for Internal and External exposure. This guide provides the general procedures for installing 3M 615+ Duct Wrap. For more detail, refer to current approvals for Internal & External Exposure at: www.3M.com.au/fireprotection.

Materials and Equipment

- Minimum 12 gauge copper-coated steel insulation pins used with minimum 63.5mm square galvanized steel or stainless steel clips or 1-1/2" (38.1mm) dia. round or equivalent sized insulated cup-head pins
- Capacitor discharge stud gun Note: Either apply min. 12 gauge copper-coated impaling pins to the bare duct using a capacitor discharge gun or apply min. 12 gauge cup-head pins after the duct wrap is installed.



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