

DecoShield® Sprinkler Cover Support System

Installation Guide & Instructions

DecoShield Systems, Inc.
1500 NW 3rd Street, #105
Deerfield Beach, FL 33442
Phone: (800) 873-0894 / (954) 725-7665
Fax: (800) 585-3894 / (954) 725-5993
Email: info@decoshield.com
Website: www.decoshield.com

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PREFACE

This booklet provides instructions for handling and fabricating the individual DecoShield® cover support system. The information is not intended in any manner to alter or supersede piping manufacturers' recommendations, UL Listing restrictions, or NFPA regulations pertaining to the CPVC plastic piping system being installed. We strongly recommend that the instructions in this booklet be completely understood prior to installing DecoShield® components.

The main key to a cost efficient, attractive installation lies in proper planning and placement of the underlying support system. To ensure the cover is linear and snug fitting when installed, it is imperative that its support devices are anchored squarely and firmly against structural surfaces in a straight line.

Each installation should begin with the consecutive installation of **both** the piping and shield systems. In this manner one can be certain that costly mistakes will not be repeated and the overall installation will be attractive. With such experience gained within the first part of the installation, you may choose to continue installing the piping in advance of the shielding with confidence.

The use of the words "shield" and "cover" are interchangeable throughout this text when referring to the DecoShield cover component or its attachments.

FOREWORD

The DecoShield cover support system is a patented modular system and is UL Listed as a decorative cover support system for use with Listed CPVC piping products produced from BlazeMaster® CPVC compound.

The DecoShield cover is manufactured from BF Goodrich TempRite® LC88975. TempRite is an engineered low flame spread, low smoke generation thermoplastic designed for interior finish construction applications. As used in the DecoShield cover, TempRite LC88975 has a flame spread index of 20 and a smoke developed index of 250. These ratings comply with most model code requirements for Class A (or 1) interior finish. The material is Classified by Underwriters Laboratories and is referenced in the UL Building Materials Directory in the category "Molded Plastics" (BTAT-File R10380).

The DecoShield hangers are manufactured from a tough, glass filled, fire retardant nylon with extraordinarily high heat distortion characteristics and excellent creep resistant properties.

The DecoShield cover is available in two basic designs. The "L" shield accommodates piping installed at the wall/ceiling juncture. The "U" shield accommodates piping installed directly against a flat ceiling.

The DecoShield cover and cover fittings must be ordered according to the size of piping to be installed. Various sizes are accommodated as follows:

TABLE I

<u>Pipe Size</u>	<u>"L" Design</u>	<u>"U" Design</u>
3/4"	SD-100L	SD-100U
1"	SD-100L	SD-100U
1 1/4"	SD-125L	SD-125U
1 1/2"	SD-125L	SD-200U
2"	SD-200L	SD-200U

Hangers must be ordered by specific pipe size (See Step 2).

WHERE TO USE THE DECOSHIELD® SYSTEM

The intended use of the DecoShield system is to act as a decorative cover and support system for UL Listed CPVC piping systems such as BlazeMaster® CPVC and, when so used, is restricted to the same types of occupancies as is CPVC piping (NFPA 13-light hazard, NFPA 13R, and NFPA 13D), and is subject to the same limitations as "exposed" CPVC piping installations as follows:

1. Installation below smooth, flat, horizontal ceiling construction.
2. Use with Listed quick-response pendant or horizontal sidewall sprinklers; or with non-recessed residential sidewall sprinklers. All sprinklers are to be installed in accordance with their Listing, but in no case more than 8" below the ceiling.

The DecoShield system is UL Listed as a decorative cover support system and, as such, is not to be construed as an acceptable means of providing protection for CPVC pipe as described in the Listing information for CPVC Pipe and Fittings (VIWT).

The "combo" hangers and the snap-2 pipe hangers may be used with CPVC piping independent of the DecoShield cover in any type of installation for which CPVC piping is Listed.

HANDLING AND STORAGE

Reasonable care must be exercised in handling DecoShield products. They must not be dropped or have objects dropped on them. If stored outside, they must be protected from direct sunlight to prevent color fading or yellowing. DecoShield covers and fittings should not be stacked or stored in a manner, which compresses the components or would distort their shape. DecoShield cover and fittings will store suitably where ambient temperatures are within the range of 35°F to 150°F.

ASSEMBLY

Specific procedural steps should be followed when installing sprinkler systems incorporating the DecoShield system.

The overall order of assembly is as follows:

Step 1 Piping and sprinkler layout (NOT COVERED IN THIS GUIDE) and DecoShield cover, fittings and hanger planning.

Step 2 DecoShield hanger and clip (shield and housing) placement and anchoring.

Important: Step 2 must be thoroughly completed prior to proceeding with Step 3.

Step 3 Piping installation.

Step 4 Piping system testing (NOT COVERED IN THIS GUIDE).

Step 5 DecoShield cover and fittings fabrication and installation.

It is of utmost importance to follow the above order to avoid installation complications.

ASSEMBLY INSTRUCTIONS

Step 1 **DecoShield System Planning**

It is important to remember that the DecoShield cover support system is a modular system. The pipe system/DecoShield cover support system installation must be cross - checked for system compatibility (i.e., sizing per Tables I, drop pipe lengths per Table II, hanger and clip locations as required by Steps 2, 3, and 5 of this guide).

The underlying support system in a DecoShield system installation plays a dual role and therefore must fulfill the individual support requirements of both the pipe and shield. (Pipe support and support spacing must be in accordance with CPVC manufacturer's installation instructions) Shield support spacing must be in accordance with the maximum allowed spacing between supports as specified herein (Step 2.2). Shield support will be derived from DecoShield pipe hangers and shield clips and for this reason the use of pipe and shield supports must be integrated to observe the required support spacing for the shield.

We suggest that your starting point in planning the DecoShield system installation be the take-off for the piping system and the required pipe support positions as determined in the take-off. With the pipe support positions predetermined:

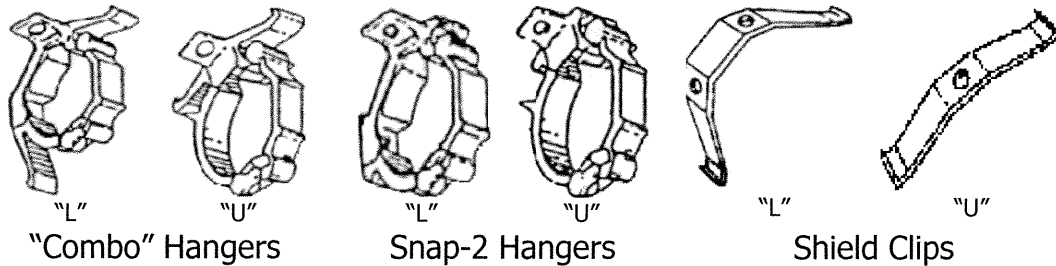
- A. Designate all pipe support positions within 30 inches of any sprinkler as snap-2 hanger locations.
- B. For all remaining pipe support positions, designate these as combo hanger locations.
- C. With hanger locations as designated in (A.) and (B.), calculate the appropriate lengths of cover (according to variables discussed in Step 5) and number of couplings and fittings necessary to conceal the piping system.
- D. Based on (C.) and the locations of hangers per (B.), designate the locations of the shield clips as required by the rules governing shield support spacing requirements as found in Step 2.2 and fitting support needs per Step 5.5.

By studying the requirements outlined in this guide, sketching sample layouts, and a little practice you will be able to readily determine the necessary placement of support members for the pipe, shield, and system fittings as dictated by each individual project.

Step 2 Hanger & Clips

Important: When employing the U design shield, a chalk line should be employed to assure all hangers and clips are installed in a straight line.

Each of the two basic DecoShield cover designs (L and U) entails the use of three types of hangers:



- 2.1 Combination or "combo" hangers and snap-2 hangers operate in basically the same manner. The combo hanger is designated to support both the pipe and shield, whereas the snap-2 hanger only supports the pipe (having no shield retaining wings). The combo hanger is designed for a time saving SNAP, SNAP, SNAP functionally. (1) Snap in the pipe, (2) Snap on the lock. (3) Snap on the cover. (Snap-2 hangers do not facilitate Step 3.)

Combo and Snap-2 hangers must be anchored in accordance with NFPA requirements applicable for the individual project being installed, i.e. NFPA 13, 13D or 13R. Such requirements include, but are not necessarily limited to:

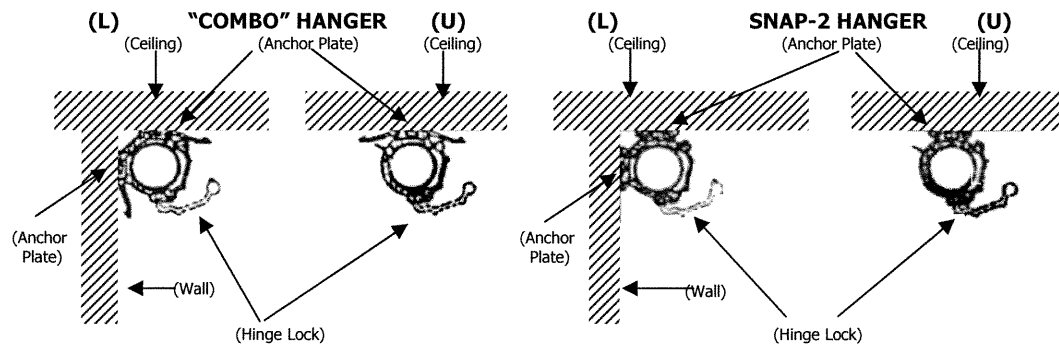
NFPA 13 and 13R: Concrete or masonry – use Listed shells or expansion shells. Drywall/wood stud – min. screw #12 x 1 ½" wood screw to structural member.

NFPA 13D: Support methods comparable to those required by local plumbing codes.

Pipe hanger spacing shall not exceed the hanger spacing requirements for CPVC piping as specified by manufacturers.

(¾" pipe @ 5 ½' max.; 1" pipe @ 6' max.; 1 ¼" pipe @ 6 ½' max.; 1 ½" pipe @ 7' max.; 2" pipe @ 8' max.).

The “combo” and snap-2 hangers must be mounted such that the flat “C” section will support the underside of the pipe as shown below:



To ensure proper attachment of DecoShield cover, alignment of combo and snap-2 hangers must be perpendicular to the pipe run and anchoring “plates” of hangers should be flat against the mounting surface before anchoring. L-design combo and snap-2 hangers should be positioned snugly in the ceiling wall juncture prior to anchoring.

- 2.2 The cover hanger or shield “clip” is designed as an economical snap-on positioning and structural support for the cover within the intermediate space between combo hangers and for certain other fittings (i.e., tees). As with hangers, alignment of shield clips must be centered on and perpendicular to the pipe run. These clips should be installed to observe the following spacing maximums between cover supports (combo hangers or shield clips) (except for lengths located within 30 inches of a sprinkler housing):

Shield Type

L-Shield
U-Shield

**Spacing between supports
Not to exceed:**

36 inches **max.**
24 inches **max.**

IMPORTANT EXCEPTIONS: It has been demonstrated that under severe fire/heat and extended fire/heat exposure, DecoShield cover can separate from the sprinkler housing. Should this condition occur, the DecoShield cover must fall away from the sprinkler and not interfere with the sprinkler water discharge pattern. To ensure this happening, the shield length adjoining the sprinkler head housing can not be supported closer than 30 inches (30") from the sprinkler housing, or, if the length of the adjoining shield is less than 30 inches (30"), that section may be supported by a clip only at the end furthest from the sprinkler housing.
Note: The sprinkler housing itself supports the shield end adjoining it.

With the above exception, all coupling joints should be supported within 12 inches (12") by either a combo hanger or clip and other fittings (i.e., corners or T's) should be likewise supported. Anchoring for shield clips may be the same as specified for combo and snap-2 hangers (See Step 2.1) or at least be of sufficient strength to hold the shield firmly against the mounting surface when the shield is snapped onto the clips.

A special clip designed to anchor an L-design sprinkler housing is provided with each housing. This housing clip must be centered directly above the intended sprinkler location. To provide the necessary clearance for the pipe fitting, a flat head or fillister screw must be used to anchor the housing clip.

Step 3 **Installing the piping system**

Important: All hangers and clips must be installed prior to erecting the piping system.

After all required hangers and clips have been properly anchored, the piping system is assembled according to the piping manufacturer's recommendations and simply "snapped" into the hangers. **Prior to "snapping" the locks around the pipe,** we recommend that the system be visually inspected to ensure all clips and hangers have been placed to properly support the shield cover and intended fittings to be installed later. Having completed such visual inspection, the combo hanger and snap-2 hanger locks are then "snapped" around the pipe, locking it in place.

When fabricating the drop assembly where a sprinkler housing is to be utilized (with the L-Shield), the length of the drop pipe is critical to the fit of the DecoShield L-design housing and care must be taken to cut the drop pipe to the proper lengths prescribed in Table II below. (See Step 5.3 regarding L-design sprinkler housing installation.)

Table II

Feed Pipe Size	Shield Design	Sprinkler C/L from Ceiling	Feed Pipe C/L from Ceiling	C/L (+/- 1/8")	
				For 3/4" Drop	For 1" Drop
3/4"	SD-100L	5"	1"	2 7/8"	---
1"	SD-100L	5"	1"	2 3/4"	2 5/8"
1 1/4"	SD-125L	6"	1 5/16"	3 5/16"	3 5/16"
1 1/2"	SD-125L	6"	1 3/8"	3 1/8"	3 1/8"
2"	SD-200L	6 1/8"	1 13/16"	2 1/2"	2 1/2"

Cut lengths assume the use of reducer tees respectively sized to accommodate feed pipe and drop pipes and are based on vertical lengths or R & G Sloane ExtinguishSure® fittings available at the time of publication. Please check for fit prior to cutting. DecoShield Systems, Inc. will not be liable for improperly cut lengths.

Important: Please check first sprinkler housing assembly to assure drop pipe length is correct prior to making any additional cuts and thereby compounding errors. This is an installer responsibility and due to the many various fittings in use, DecoShield Systems, Inc. cannot assume any liability.

After pressure testing the piping system, the decorative cover may be snapped in place.

Step 4 **Piping System Testing**

Testing the piping system is not covered in this guide. (See steps 5.3 and 5.4 for sprinkler head installation.)

Step 5 **Laying out, fabricating and assembling the DecoShield cover/fittings**

Remember: Piping system must be pressure tested prior to installing DecoShield cover and fittings.

When laying out the DecoShield system, it is best to begin at sprinkler housings (due to the predetermined exactness of its location and the minimum shield support spacing restriction) and work away from it.

Tools required to fabricate the DecoShield cover are: screwdriver, fine tooth saw (we recommend a power saw with a fine tooth blade), mitre box (to ensure square cuts), and a deburring file. All fittings (sprinkler housings, couplings, corners, etc.) are designed to accommodate square cuts. Burrs should be filed from cut ends.

Exact measurements are required when cutting DecoShield cover to length. Preliminary "layout" of the DecoShield components as required by the specific installation will ensure the proper fit of the entire DecoShield system.

The DecoShield cover system is designed so that joints created by adjoining cover pieces and/or fittings are concealed by "overlap" flaps on "joint concealing parts" (JCPs); these being couplings (Step 5.2) and line transitions and in-line reducers (Step 5.5). Cover ends are also concealed by insertion into housings (Steps 5.3 and 5.4). To ensure the proper length of cut shield, allowance must be made for JCPs at each system joint. The normal take-out allowance of JCPs is 1/8" to 1/4" max. DecoShield cover must be cut to the proper length with allowance for insertion into JCPs to prevent visible gaps between cover system components.

5.1 DecoShield Cover

With the shield cut to the proper length (see preceding paragraph) and positioned, it is simply pressed onto each combo hanger and clip until a definite "snap" is heard from each hanger/clip arm. This is best accomplished by attaching one side of the shield cover first and then the opposite side and is best done by applying pressure only directly at hanger and clip locations by pinching the shield with thumb and fingers.

5.2 Couplings

Whenever joining a length of DecoShield cover to another length or to a fitting, a DecoShield coupling must be employed to assure alignment, structural integrity, and to allow for thermal expansion and contraction. The coupling connects the cover lengths via tabs that slip into the interior grooves of the cover. The end of the cover will be concealed by a grooved outer flap on the coupling. When assembling, place the coupling on the installed cover or fitting first, then connect the next cover to the coupling and finally snap the added cover in place.

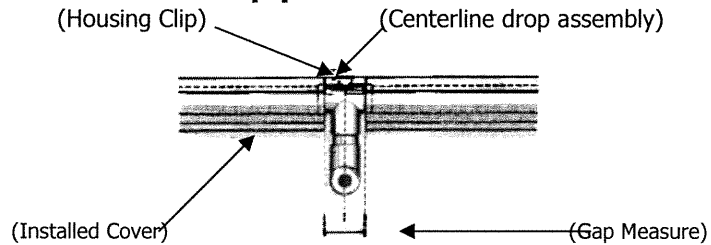
5.3 Sprinkler Housing: L-Design

The L-design sprinkler housing serves as a cover and also provides multi-directional support for the sprinkler and connecting drop assembly. There are two types of L-design housing; one for installation between two cover lengths and the other for the end of a cover/pipe run.

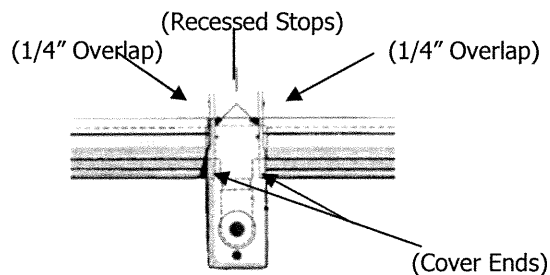
Important: Specify which housing type is required when ordering. For your convenience, the housing is furnished complete with an adapter (see Step 5.3.4), a support clip, and screw head cap.

To install the L-design housing, the following procedure should be adhered to:

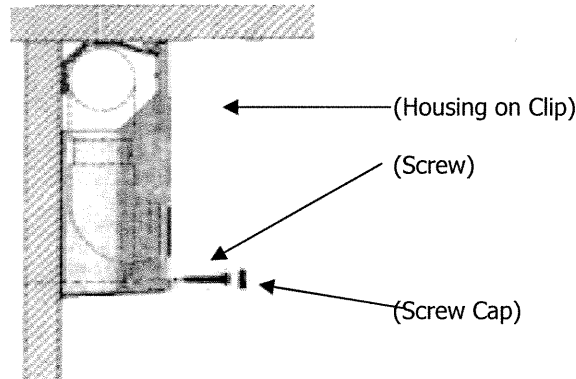
- 5.3.1 The housing when installed will conceal the ends of the adjoining cover. To assure the correct positioning of the cover and the cover stops in the housing, when the cover is installed the spacing between the ends of the two cover lengths should be a minimum 1.85" for 100 series, 2.05" for 125 series, and 1.85" for 200 series. The spacing must be centered on the sprinkler drop assembly. (When using a housing to end a cover/pipe run, the measurement to the single cover end from the drop assembly centerline is $\frac{1}{2}$ the spacing specified.) The housing will be snapped onto the housing support clip anchored to the ceiling and centered above the sprinkler. **Important – this clip must be in place before the pipe is installed.**



- 5.3.2 The L-design sprinkler housing is placed in position centered on the housing clip and snapped onto its clip. When the cover is installed, the cover stops on the interior surface of the housing should fit inside the ends of the covers and the housing should overlap and conceal the cover ends. Position adjustment of the L-Shield cover may be required to create the overlap and thereby eliminate gap openings. Position adjustment is best accomplished by sliding the cover along its clip supports.



- 5.3.3 The base of the housing is then anchored to the wall with a fastener ensuring the top of the housing is flush against the ceiling. Fasteners may include #12 x 2" pan head wood screw or, where concrete or masonry are encountered, #12 x 2 1/2" self-tapping screw (such as Tapcon®) or an expansion shell. All anchoring devices are to be the same as specified for combo and snap-2 hangers (See Step 2.1). After anchoring the housing, the screw head cap is snapped into place to hide the exposed screw head.



5.3.4 Sprinkler Devices, Adapters, and Plugs:

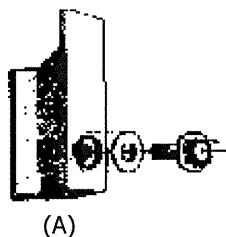
The standard adapter (CP-050T-00) provided with each sprinkler housing accommodates sprinklers utilizing 1/2" NPT.

Special adapters to accommodate other sizes (e.g. 3/4" NPT) and Central Sprinkler Corporation's "Omega" sprinklers must be ordered separately. Sprinkler housing plugs take the place of sprinklers and adapters and are utilized to "plug" the hole opening for the sprinkler on the front of an L-sprinkler housing. Plugs are needed in L-Shield systems when piping is dropped and "punched" through back walls to adjoining rooms and an L-sprinkler housing is used to conceal the drop pipe assembly.

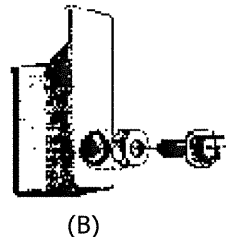
The sprinkler and adapter are installed as illustrated below: **(Note: sprinkler head housing must be installed prior to installing sprinkler device.)**

L-Housing (Sidewall)

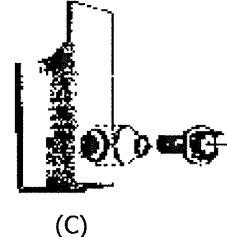
Normal
Installation



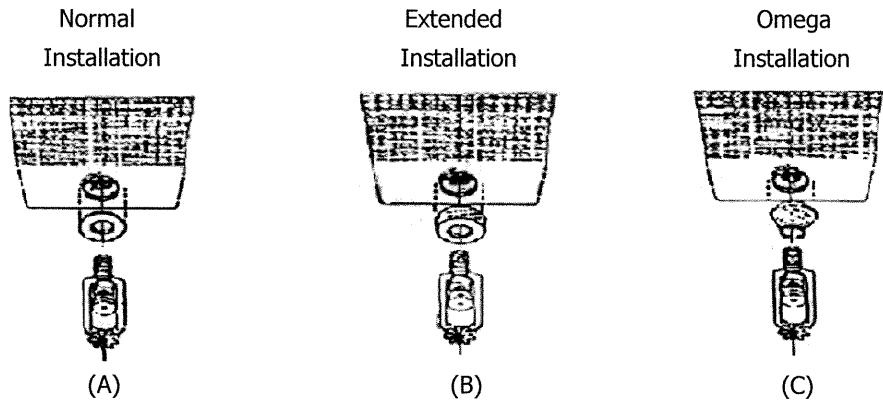
Extended
Installation



Omega
Installation



U-Housing (Pendant)



- (A) Sprinkler fitting flush with housing opening – use standard adapter (Part# - CP-050T-00) supplied with housing.
- (B) Sprinkler fitting extended from housing opening – use adapter Part# - CP-050T-56 (9/16" deep) or adapter Part# - CP-050T-75 (3/4" deep).
- (C) Sprinkler fitting flush or extended from housing opening using Central Sprinkler's Omega devices – use adapter Part# CW001C00 (sidewall) or CP-050T-R1 (pendant).
- (D) Sprinkler fitting recessed within housing. This sometimes occurs when using Spears fittings within SH-125L and SH-200L sprinkler head housings.

Use a 0.50 inch long threaded #101 extension (manufactured by United Brass; Phone# (800) 334-3035) and use adapter Part# CP-050T-56 or CP-050T-75.

Please Note: The many dimensional variables of the numerous pipe fittings and sprinkler devices available create situations as described above. It is not possible for DecoShield Systems, Inc. to predict or track all of these variables.

To assure total compatibility and minimize costly field time, we strongly urge a pre-job mock-up of your intended sprinkler adapter, sprinkler device, sprinkler head housing, and adapter prior to beginning your project.

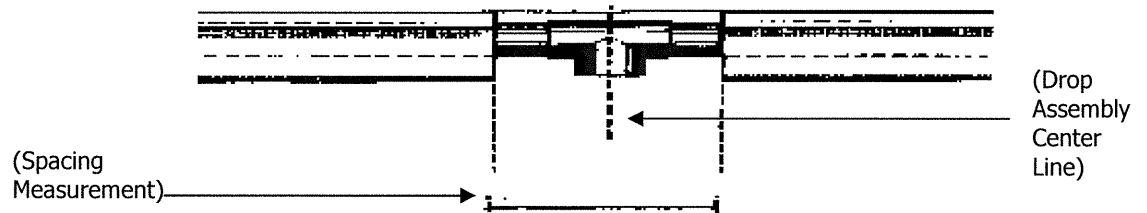
5.4 Sprinkler Housing: U-Design

There are two types of U-design sprinkler housing; one for installation between two cover lengths and the other for capping the end of a cover/pipe run.

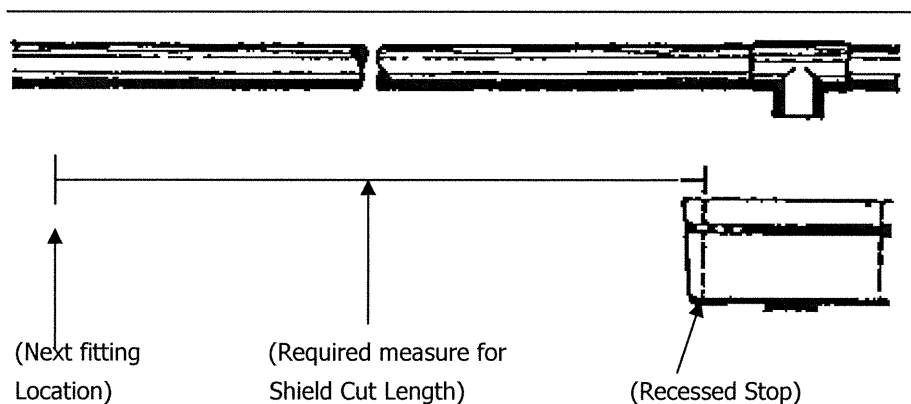
Important: Specify which housing type is required when ordering. For your convenience, the housing is furnished complete with an adapter (see Step 5.3.4) and screw head caps.

To install either U-design housing, the following procedure should be adhered to:

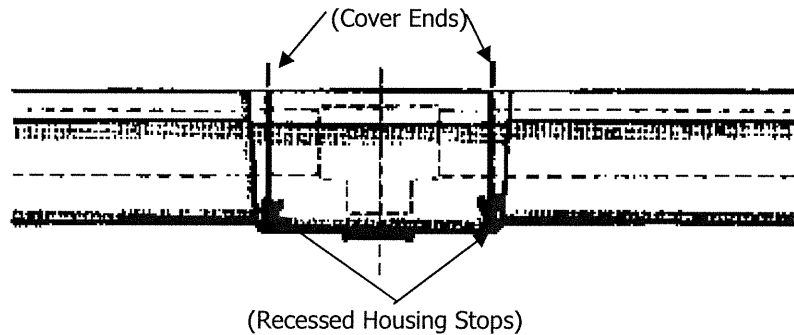
- 5.4.1 The housing when installed will conceal the ends of the adjoining cover. To assure the correct positioning of the cover and the cover stops in the housing, when the cover is installed the spacing between the ends of the cover lengths should be a minimum 4.7" for all series sizes. This spacing must be centered on the sprinkler drop assembly. (When using a housing to cap the end of a cover/pipe run, the measurement to the single cover end from the drop assembly center line is $\frac{1}{2}$ the spacing specified.)



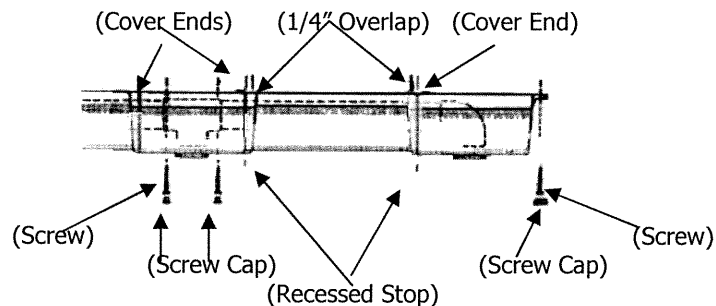
- 5.4.2 The DecoShield cover extending outward from the U-design sprinkler housing must be cut to length as measured from the planned location of the recessed stop in the housing and then to the next fitting (with allowance for insertion into the coupling) at the end of the cover opposite and away from the housing. This measurement is critical to ensure the cover end inserts into the housing a maximum of $\frac{1}{4}$ " (up to the recessed stop) and to prevent cover "gaps" between fittings.



- 5.4.3 The U-design sprinkler housing is placed in position centered on the drop assembly. When the cover is installed, the cover stops on the interior surface of the housing should fit inside the ends of the covers and the housing should overlap and conceal the cover ends. Position adjustment of the U-shield cover may be required to create the overlap and thereby eliminate gap openings. Position adjustment is as described in 5.3.2. With the required overlap achieved, the housing can be anchored.



- 5.4.4 The base of the U-design housing is anchored with the same anchoring devices specified for combo and snap-2 hangers (See Step 2.1). The screw should only be tightened to install the housing firm against the ceiling. After anchoring the housing, screw head caps are snapped into place to hide the exposed screw heads.



- 5.4.5 For sprinkler device and adapter compatibility and assembly, see Step 5.3.4.

5.5 Fittings

A large variety of fittings are available to aid and complete your installation of the DecoShield cover support system. Among these are inside and outside corners, elbows, T-joints, and transition tees. Installation of most of these fittings requires prior positioning of support members (shield clips or hangers). Take out allowances for each fitting should be consulted to correctly position the needed support members. **(CSE recommends using one support member to support each leg of a corner, elbow, or tee).** These fittings are incorporated into the complete system by various methods prescribed below.

- **Inside/Outside Corners:** are available in both L-Shield and U-Shield designs. L-Shield Corners are utilized to cover 90° horizontal pipe bends around or in room wall corners and U-Shield Corners are utilized to cover 90° vertical pipe bends when piping transitions down a wall between ceilings of different heights. Inside L-Shield Corners, when inverted, also can accommodate horizontal to vertical piping in room corners. Corners are installed by snapping the Corner onto shield clips (installed prior to pipe installation) just as shield is snapped onto clips. If the corners of the structure being retrofitted are rounded with excess plaster, it may be necessary to remove such excess to assure a flush fit. This is best accomplished using a hammer and chisel. Each Corner requires 2 couplings of comparable shield size.



"U" Inside
Corner



"U" Outside
Corner

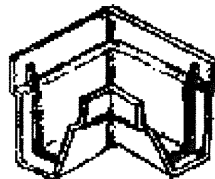


"L" Inside
Corner



"L" Outside
Corner

- **Elbows:** are utilized in U-Shield systems to conceal 90° turns in the piping. Elbows are installed in the same manner as corners (snapped onto clips installed prior to the piping). Each elbow requires 2 couplings of comparable shield size.

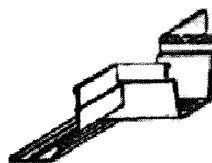


90° Elbow – U

- **T-Joints and Transition Tees:** are utilized where piping branches via pipe tees. Tees are installed just as corners and elbows. Each tee requires 3 couplings of comparable shield size.

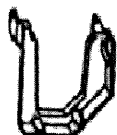


"U" Shield
Tee



Transition
Tee L & U

- **Line Transitions and Inline Reducers:** are utilized to change shield shape or size within a pipe run. Line Transition parts are specifically left and right oriented and need to be ordered specific to the orientation of the shield shape and size of the installation. Transitions and reducers are installed in the same manner as couplings.



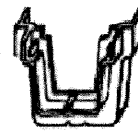
Transition
L x U



Transition
U x L

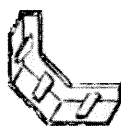


Line Reducer
"L" to "L"

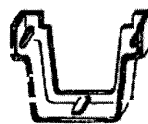


"U" Line
Reducer

- **Wall Flanges:** are utilized to terminate end runs of shield at wall junctions. When assembling, the wall flange is placed on the end of the shield and the shield is then snapped in place.



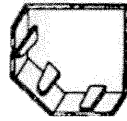
"L"
Wall Flange



"U"
Wall Flange

5.6 End Caps

While DecoShield end caps are available, the appearance of the room is greatly enhanced with the extension of the DecoShield cover beyond the last sprinkler for the entire length of the wall or ceiling. When this procedure is used, only shield "clips" are required beyond the last sprinkler. End caps exhibit the inner and outer overlap common to couplings and attach to the open end of the shield cover.



"L"
End Cap



"U"
End Cap

5.7 Finishing

Finishing Caulk – In many retrofit installations, the original ceiling construction may not be perfectly level. In such situations it may be necessary to use additional shield supports (clips or combo hangers) and /or to use caulk to avoid unacceptable lines or gaps between the shield and the structure. Where ceiling or wall surfaces contain irregularities in excess of 1/8" depth, such surfaces must either be prepared prior to installing the cover by applying a smooth layer of caulk or plaster along the lines where the cover meets the ceiling or wall or by subsequently filling voids with vinyl spackling compound using a caulking gun.

Painting the DecoShield cover – Your DecoShield system should maintain its nice appearance indefinitely and does not require painting. If a color change is desired, however, it may be painted with any good quality acrylic latex paint. If such is the case, it is recommended that the cover be spray painted prior to installation.

Important: Care must be taken to avoid paint contacting the sprinkler.

Clean up – The DecoShield system may be cleaned after installation with a damp cloth and mild soap detergent or glass cleaner and an easy pressure. Among the approved and recommended cleaning agents are: Windex, Ajax Liquid, Comet, Fantastik, Glass Plus, and Spic-n-Span/Pine. Certain other cleaning agents have been found to cause discoloration on the shield cover and should be avoided. Cleaning agents to avoid are: Murphy's Oil Soap, Pinesol, Top Job, Mr. Clean, and Formula 409.

5.8 Troubleshooting

If during installation it becomes necessary to remove an installed section of DecoShield cover, the only method to do so is to slide the cover lengthwise along its hanger and clip supports while pulling the shield outward from the mounting surface at one end. Careful planning and exact measurements as specified herein will reduce the likelihood of this necessity.

In Summary...

The DecoShield system is designed to provide economical advantages to the sprinkler contractor and building owner. It is also designed to greatly enhance the appearance of the rooms to be sprinkler protected.

The economical benefits, long term performance, and attractiveness of this system will be maximized if it is installed in accordance with the guidelines and recommendations as stated in the 5 Steps above.

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Tapcon® copyright of ITW Buildex

ExtinguishSure® copyright of R & G Sloane Manufacturing Co., Inc.

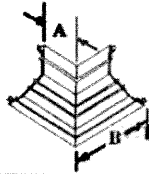
Take Out Allowances

Couplings
End Caps
Wall Flanges
Line Reducers
Line Transitions

CJ Series
EC Series
WF Series
LR Series
LT Series

1/8"
1/8"
1/8"
1/8"
1/8"

"L" Inside Corner - IC Series



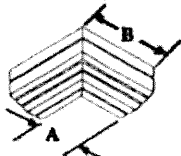
Part#	"A" Dim.	"B" Dim.
IC-100L-90	5 1/2"	7 7/8"
IC-125L-90	5 1/2"	8 1/2"
IC-200L-90	5 1/2"	9 1/4"
IC-250L-90	5 1/2"	11 1/4"

"U" Inside Corner - IC Series



Part#	"A" Dim.	"B" Dim.
IC-100U-90	5 1/2"	7 3/4"
IC-125U-90	5 1/2"	8 3/8"
IC-200U-90	5 1/2"	9 1/4"

"L" Outside Corner - OC Series



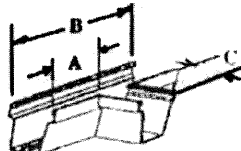
Part#	"A" Dim.	"B" Dim.
OC-100L-90	5 1/2"	7 7/8"
OC-125L-90	5 1/2"	8 1/2"
OC-200L-90	5 1/2"	9 1/4"
OC-250L-90	5 1/2"	11 1/4"

"U" Outside Corner - OC Series



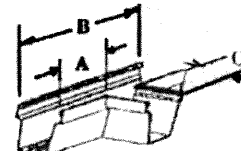
Part#	"A" Dim.	"B" Dim.
OC-100U-90	5 1/2"	7 3/4"
OC-125U-90	5 1/2"	8 3/8"
OC-200U-90	5 1/2"	9 1/4"

"U" Tee - TJ Series



Part#	"A" Dim.	"B" Dim.	"C" Dim.
TJ-100U-00	5 3/16"	13"	5 3/16"
TJ-125U-00	5"	13"	5"
TJ-200U-00	5"	14 1/4"	5"

Reducer Tee "U" & "U" - TJ Series



Part#	"A" Dim.	"B" Dim.	"C" Dim.
TJ-125U-10	5 3/16"	13"	5 3/16"
TJ-200U-25	5"	13"	5"

Transition Tee "L" & "U" - TT Series



Part#	"A" Dim.	"B" Dim.	"C" Dim.
TT-100L-00	5 3/16"	13"	5 3/16"
TT-125L-00	5"	13 3/4"	5"
TT-200L-00	5"	14 1/4"	5"
TT-125L-10	5 3/16"	13"	5 3/16"
TT-200L-25	5"	13"	5"
TT-250L-20	5"	14 1/4"	5"

EX4144,07/91

10 Year Limited Warranty

DecoShield Systems, Inc. ("DecoShield Systems") warrants that DecoShield products are free of material and workmanship defects for a period of ten (10) years from the delivery date of the products and that any defective products will be replaced without charge by DecoShield Systems, Inc., provided DecoShield Systems and/or their authorized agent is given the prior opportunity to inspect any alleged defective product and to examine the installation and use thereof.

Except as set forth herein, DecoShield Systems, Inc. makes no representations or warranties, express or implied, of any kind or nature, including, but not limited to, any representation or warranties that DecoShield products are merchantable or fit for any particular purpose. The warranty set forth herein does not apply to and under no circumstances will DecoShield Systems, Inc. be liable for, any incidental, indirect, special or consequential damage, loss, penalty or expense of any kind, including, but not limited to, any expenses incurred for product removal or re-installation. DecoShield Systems, Inc. will not be liable for any damage to or defect in any DecoShield product which has been subject to misuse, neglect or accident or which has been stored, used or installed in violation of recommended installation or maintenance procedures.

DecoShield Systems, Inc.

1500 NW 3rd Street, #105
Deerfield Beach, FL 33442
Phone: (800) 873-0894
Fax: (800) 585-3894