

SUBMITTAL RECORD _____
 JOB _____
 LOCATION _____
 SUBMITTED TO _____
 SUBMITTAL PREPARED BY _____
 APPROVED BY _____
 DATE _____



Submittal Form BAB - Cupped Washer Insulation Fastener

DESCRIPTION: When liner is placed inside air conditioning or heating duct work, the movement of air could cause the insulation to delaminate. To prevent this, SMACNA Specifications call for the use of fasteners in addition to adhesive to secure the liner. The fasteners may be of three types:

- A. ADHESIVE:** This fastener is bonded to the ductwork with an appropriate adhesive and allowed to set up. After sufficient drying time the liner is impaled on the pin and a washer added to retain the liner.
- B. MECHANICAL:** This type of fastener mechanically attaches itself to the duct work. The most popular style is a hardened nail with an attached washer. This fastener is impact driven through the liner and forms a positive mechanical grip with the metal.
- C. WELD:** This fastener forms a permanent bond to the duct work by becoming part of it as in any weld. Two styles are currently in use. The first fastener is a mechanical fastener which is driven through the liner and welded to the duct work underneath. The second fastener is a pin which is welded to the duct work prior to the insulation. The liner is then impaled (much like the adhesive fastener) over the pin and secured by a washer.

SPECIFICATIONS

Insulation Fasteners are designed to meet SMACNA HVAC Duct Construction Standard for Mechanical Fasteners.
 All steel used meets ASTM-A591.
 All dimensions used in pin length are from bottom of head or base of fastener.
ALL PINS AND WASHERS ARE ZINC PLATED CRS UNLESS OTHERWISE STATED.



BAB Cupped Washer Weld Pins
 Pin: .130" Diameter
 Washer: Diameter - 1.0"
 Thickness: - .015" - .017"

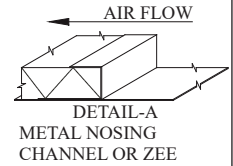
Item#	Code	Nominal Length After Setting	Use
25200	BAB12	.365	1/2" insulation
25201	BAB34	.531	1" 1-2# density
25202	BAB100	.781	1" 2-3# density
25203	BAB118	1.000	1" 3# density
25204	BAB150	1.365	1-1/2" insulation
25205	BAB200	1.781	2" insulation

SUGGESTED SPECIFICATIONS

All duct liner shall be secured to the duct work in accordance with SMACNA HVAC Duct Construction Standards. Fasteners shall be weld type fastener code BAB as manufactured by Duro Dyne Corporation, Bay Shore, N.Y.

- DUCT LINER INSTALLATION -

METAL NOSING MUST BE USED WHEREVER LINER IS PRECEDED BY UNLINED METAL; OTHERWISE WHEN VELOCITY EXCEEDS 4000 FPM (20.3 MPS) USE METAL NOSING ON EVERY LEADING EDGE. NOSING MAY BE FORMED ON DUCT OR BE CHANNEL OR ZEE ATTACHED BY SCREWS, RIVETS OR WELDS.

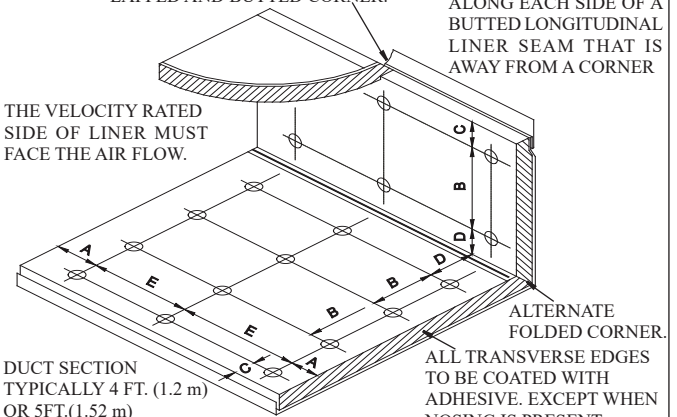


INTERIOR WIDTH OF 8"(200 mm) AND LESS DOES NOT REQUIRE PINS

LAPPED AND BUTTED CORNER.

PLACE PINS 3" (76 mm) ALONG EACH SIDE OF A BUTTED LONGITUDINAL LINER SEAM THAT IS AWAY FROM A CORNER

THE VELOCITY RATED SIDE OF LINER MUST FACE THE AIR FLOW.



DUCT SECTION TYPICALLY 4 FT. (1.2 m) OR 5 FT. (1.52 m)

ALL TRANSVERSE EDGES TO BE COATED WITH ADHESIVE. EXCEPT WHEN NOSING IS PRESENT.

MAXIMUM SPACING FOR FASTENERS. ACTUAL INTERVALS ARE APPROXIMATE

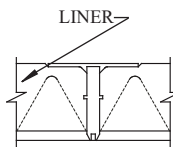
"A" PIN ROW MAY BE OMITTED WHEN METAL NOSING IS USED. "E" THEN STARTS FROM THE NOSING.

LINER ADHERED TO THE DUCT WITH 90% MIN. AREA COVERAGE OF ADHESIVE

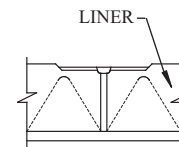
Velocity*	Dimensions				
	A	B	C	D	E
0-2500 FPM (0-12.7 MPS)	3"	12"	4"	6"	18"
2501-6000 FPM (12.7-30.5 MPS)	(76.2)	(305)	(102)	(152)	(457)

*UNLESS A LOWER LEVEL IS SET BY MANUFACTURER OR LISTING AGENCY

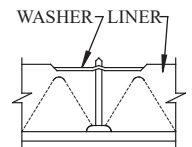
- LINER FASTENERS -



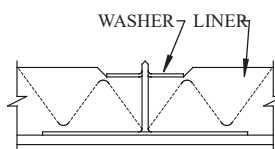
TYPE 1
CLINCHED PIN:
INTEGRAL HEAD-
IMPACT APPLIED
BANGER™ / TRIPOD™



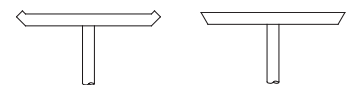
TYPE 2
WELDED PIN INTEGRAL
HEAD FTC / RIB PIN™ /
GOLD SEAL



TYPE 3
WELDED PIN PRESS-
ON HEAD PN / LN



TYPE 3
ADHERED PIN PRESS-ON HEAD
SAH / PBH / STK / FLIPTIX



CUPPED HEAD TYPES
BEVELED HEAD TYPES

INSTALLED PINS AND WASHERS SHALL NOT COMPRESS LINER MORE THAN THE CORRECT LENGTH SPECIFIED FOR THE LINER THICKNESS USED.

