
SPEEDI-BOOT™

BOOT HANGER

Submittal Form

Contractor Name:

Job Name:

Date:

Please check one of the following Speedi-boot model numbers.

- | | | | | |
|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| <input type="checkbox"/> SBH 48 | <input type="checkbox"/> SBH 410 | <input type="checkbox"/> SBH 412 | <input type="checkbox"/> SBH 414 | <input type="checkbox"/> SBH 610 |
| <input type="checkbox"/> SBH 612 | <input type="checkbox"/> SBH 614 | <input type="checkbox"/> SBH 88 | <input type="checkbox"/> SBH 810 | <input type="checkbox"/> SBH 814 |
| <input type="checkbox"/> SBH 1010 | <input type="checkbox"/> SBH 1212 | <input type="checkbox"/> SBH 1414 | <input type="checkbox"/> SBH 1424 | <input type="checkbox"/> SBH 1616 |
| <input type="checkbox"/> SBH 1620 | <input type="checkbox"/> SBH 2020 | <input type="checkbox"/> SBH 2025 | <input type="checkbox"/> SBH 2030 | |



500 Colorado Street Kelso, WA 98626
Phone: 1.866.794.7900 • Fax 1.360.577.0876
www.speediboot.com

[Speedi-Boot is the world's first telescoping boot-hanger frame system.](#)

INDEX

PRODUCT MODEL DESCRIPTION -----	3
GUIDE SPECIFICATIONS & FEATURES-----	5
COMPLIANCE-----	6
TESTING-----	7



PRODUCT MODEL DESCRIPTION

Product Model	Description	Nominal Opening	Material Thickness
SBH 48	Manufactured with galvanized G90 sheet metal For both Base Frame and Telescoping Arms. For Use in both Residential and Commercial projects.	4" D x 8" W	7mm (23Ga.)
SBH 410	Manufactured with galvanized G90 sheet metal For both Base Frame and Telescoping Arms. For Use in both Residential and Commercial projects.	4" D x 10" W	7mm (23Ga.)
SBH 412	Manufactured with galvanized G90 sheet metal For both Base Frame and Telescoping Arms. For Use in Residential and Commercial projects.	4" D x 12" W	7mm (23Ga.)
SBH 414	Manufactured with galvanized G90 sheet metal For both Base Frame and Telescoping Arms. For Use in Residential and Commercial projects.	4" D x 14" W	7mm (23Ga.)
SBH 610	Manufactured with galvanized G90 sheet metal For both Base Frame and Telescoping Arms. For Use in Residential and Commercial projects.	6" D x 10" W	7mm (23Ga.)
SBH 612	Manufactured with galvanized G90 sheet metal For both Base Frame and Telescoping Arms. For Use in Residential and Commercial projects.	6" D x 12" W	7mm (23Ga.)
SBH 614	Manufactured with galvanized G90 sheet metal For both Base Frame and Telescoping Arms. For Use in Residential and Commercial projects.	6" D x 14" W	7mm (23Ga.)
SBH 88	Manufactured with galvanized G90 sheet metal For both Base Frame and Telescoping Arms. For Use in Residential and Commercial projects.	8" D x 8" W	7mm (23Ga.)
SBH 810	Manufactured with galvanized G90 sheet metal For both Base Frame and Telescoping Arms. For Use in Residential and Commercial projects.	8" D x 10" W	7mm (23Ga.)
SBH 814	Manufactured with galvanized G90 sheet metal For both Base Frame and Telescoping Arms. For Use in Residential and Commercial projects.	8" D x 14" W	7mm (23Ga.)



PRODUCT MODEL DESCRIPTION

Product Model	Description	Nominal Opening	Material Thickness
SBH 1010	Manufactured with galvanized G90 sheet metal For both Base Frame and Telescoping Arms. For Use in Residential and Commercial projects.	10" D x 10" W	7mm (23Ga.)
SBH 1212	Manufactured with galvanized G90 sheet metal For both Base Frame and Telescoping Arms. For Use in Residential and Commercial projects.	12.25" D x 12.25" W	7mm (23Ga.)
SBH 1414	Manufactured with galvanized G90 sheet metal For both Base Frame and Telescoping Arms. For Use in Residential and Commercial projects.	14.25" D x 14.25" W	7mm (23Ga.)
SBH 1424	Manufactured with galvanized G90 sheet metal For both Base Frame and Telescoping Arms. For Use in Residential and Commercial projects.	14.25" D x 14.25" W	7mm (23Ga.)
SBH 1616	Manufactured with galvanized G90 sheet metal For both Base Frame and Telescoping Arms. For Use in Residential and Commercial projects.	16.25" D x 16.25" W	7mm (23Ga.)
SBH 1620	Manufactured with galvanized G90 sheet metal For both Base Frame and Telescoping Arms. For Use in Residential and Commercial projects.	16.25" D x 20.25" W	7mm (23Ga.)
SBH 2020	Manufactured with galvanized G90 sheet metal For both Base Frame and Telescoping Arms. For Use in Residential and Commercial projects.	20.25" D x 20.25" W	7mm (23Ga.)
SBH 2025	Manufactured with galvanized G90 sheet metal For both Base Frame and Telescoping Arms. For Use in Residential and Commercial projects.	20.25" D x 25.25" W	7mm (23Ga.)
SBH 2030	Manufactured with galvanized G90 sheet metal For both Base Frame and Telescoping Arms. For Use in Residential and Commercial projects.	20.25" D x 30.25" W	7mm (23Ga.)



GUIDE SPECIFICATIONS & FEATURES

Part 1- General

1.01 Summary

A. This section includes application for both Residential and Commercial installations to.

1. Floor installations
2. Wall installations
3. Ceiling installations

1.02 Submittals

A. Prepare and submit for approval information as required by the conditions of the contract and division 1 Submittals Section.

B. Submit product data for each Speedi-Boot Model size specified.

1.03 Quality Assurance

A. Installers shall be qualified to perform work of this section and shall be experienced in the performance of installation operations as appropriate to the project.

1.04 Delivery and Storage

A. Deliver all Speedi-Boots to the project site in Manufacturers original unopened, undamaged packaging. Store in a safe place protected from moisture, and physical damage before and during installation.

Part 2- Execution

2.01 Inspection

A. Verify that all Speedi-Boots to be installed in accordance with project drawings, specifications and local codes.

B. Confirm that all necessary wall, partition and floor/ceiling assembly construction has been completed to the point where the installation may be correctly installed.

2.02 Installation

A. Install in compliance with manufacturers instructions and good workmanship so that the performance requirements are met.

2.03 Safety Precautions

A. Conduct all job site operations in compliance with applicable provisions of the Occupational Safety and Health Act and/or Safety and Health Codes and Regulations.

Part 3- Features

3.01 Rigid Frame

23 Ga. G90 galvanized rigid steel frame provides a sturdy base frame and solid Register/Grille backing for set screw installation. Pre-Piloted holes provides easy and level Register Grille installations.

3.02 Adjustable Sliding Brackets

Telescoping arm extension capability allows for both 16" and 24" Joist/Truss span application. Precise installation In either parallel, transverse, horizontal or vertical positions. Reduced risk of injury from custom wood and metal framing.

3.03 Air Tight Installation

Closed cell rubber gasket provides an Air Tight Seal interface with Floor, Wall or Ceiling significantly reducing air Leakage and increases energy efficiency of Boot installations. Duct pressure testing may be accomplished with Dust and Debris Cover in place prior to wall board installation to identify leak Points if any prior to duct system covering.

3.04 Dust and Debris Cover

Provided Dust and Debris Cover prevents construction debris from contaminating duct system during construction phase of project providing a clean healthy duct system.

3.05 Mud-Ring

Solid Mud-Ring eliminates boot deformation and accidental Boot covering during drywall installation. Ensures consistent dimensions for Register/Grille installation.

3.06 Wood-Metal Stud Applications

Telescoping Arms provided with Pre-Attached nails for Wood construction and pre-piloted holes for Metal construction projects.

3.07 Multi Size Capability

Fits most universal Ceiling, Wall and Floor boots and duct sizes. multiple sizes for most common sizes utilized for both Supply and Return Air Boots and Ducts.

3.08 Improved Indoor Air Quality

Sealed gasket prevents unwanted air infiltration from unwanted areas such as crawl spaces, attics and unfinished basements which may harbor unwanted Molds, Mildews, Allergenic or Toxilogical Sources.

Part 1- General

1.01 ASHRAE Compliance

A: Compliance with the following ASHRAE Standards
Are met with the test results of an independent testing
Agency which evaluated the Speedi-Boots Air Seal and
Dust and Debris Cover performance.

Part 2 – Duct Sealing

2.01 ASHRAE 90.1-2001 – Recessed Equipment

A: Section 5.5.1.3 states. In all cases, air leakage through
Or around Recessed Equipment to the Conditioned Space shall
Be limited in accordance with 5.2.3.1.

B: Section 5.2.3.1 Building Envelope Sealing. Building Envelope
Sealing shall comply with 5.5.3.1 paragraph E, Building Assemblies
used as Ducts or Plenums.

2.02 Ducts and Plenum Leakage

A: Section 6.2.4.2.1 Duct sealing. Ductwork and Plenums shall be
Sealed in accordance with Table 6.2.4.2.1A (Table 6.2.4.2.1B provides
Definitions of Seal Levels) as required to meet the requirements of
6.2.4.2.2 and with Standard Industry Practice. (See appendix E)

**Table 6.2.4.2.1A
Minimum Duct Seal Level.**

Duct Location	Duct Type			
	Supply		Exhaust	Return
	< 2 IN W.C. b	> 2 IN W.C. b		
Outdoors	A	A	C	A
Unconditioned Spaces	B	A	C	B
Conditioned Spaces	C	B	B	C

- A: See table 6.2.4.2.1B Definition of Seal Level.
- B: Duct design static pressure classification.
- C: Includes indirectly Conditioned Spaces such as Return Plenums

**Table 6.2.4.2.1B
Duct Seal Levels**

Seal Level	Sealing Requirements a
A	All transverse joints longitudinal seams, and duct wall penetrations. Pressure sensitive tape shall not be used as the primary sealant.
B	All transverse joints and longitudinal seams. Pressure sensitive tape shall not be used as the primary sealant.
C	Transverse joints only.

A: Longitudinal seams are joints in the direction of airflow. Transverse joints are connections of two duct sections oriented perpendicular to air-flow. Duct wall penetrations are openings made by any screw fastener, pipe rod, or wire. Spiral Lock seams is round and flat oval duct need not be sealed. All other connections are considered transverse joints, including but not limited to spin-ins, taps and other branch connections, access door frames and jambs, duct connections to equipment etc.

Testing

ENVIRO-SEAL Inc.

Indoor Air Quality Weatherization Specialties

11/17/04

To: Alan Pilger
Lance Larkin

From: Steve Phelps
Enviro-Seal Inc.

RE: Speedi Boot Testing

Dear Mr. Pilger,

Per your request, we have conducted tests on the Speedi Boot, a new product designed for easing installation of HVAC boots and contributing to the effectiveness in sealing air leakage at the interface of the duct-distribution assembly. Please find the results of our tests along our impressions in the accompanying pages.

Thank you for the opportunity allowing us to evaluate this product. I am happy to report that it performed to my expectations and the evidence confirms that Speedi Boot has much to offer in improved efficiency (speed of installation and versatility) and greater effectiveness (reducing heat loss and enhancing indoor air quality).

Sincerely,

Steve Phelps (CEO, Enviro-Seal Inc.)

PURPOSE OF THIS TEST:

- 1) Compare the ease of installation of HVAC boot using Speedi Boot vs. conventional installation techniques. The measurable parameter included measurement of time required for installation. Adaptability and final appearance were subjective comparisons.
- 2) Compare air loss at the interface between the HVAC boot and the floor surface using Speedi Boot vs. convention installation techniques.
- 3) Determine the effectiveness of the factory installed dust and debris cover in restricting air flow.

METHOD:

Field Test to Compare Adaptability and Speed of Application

A home remodel was used as an opportunity to compare the time needed to assemble and attach the Speedi Boot to the floor and ceiling vs. the time required to utilize the conventional approach for the HVAC boot in a similar application.

Laboratory Test to Determine Air Loss

A sealed chamber was designed and constructed containing three HVAC Boots around which, measuring devices could monitor air loss at each boot; (a) a conventionally installed boot, (b) a Speedi Boot application with the factory sealed dust and debris cover removed and (c), a Speedi Boot application with the factory installed dust and debris cover left intact.

Icynene, a spray foam insulation material, was applied inside the 2 of the boots as an air flow barrier (a,b). The factory sealed cover was retained on (c) for the purpose of testing it's resistance to loss of integrity under air pressure, thus helping to predict it's dependability during duct pressure testing. Air pressure was introduced into the chamber and pressure testing devices were used to (i) measure pressure within the chamber and (ii) measure the pressure of escaping air at each boot. The purpose of this study was to measure pressure differential and thus to determine resistance to air loss between the different systems.

RESULTS:

Field Test to Compare Adaptability and Speed of Application

The results revealed a significant time advantage for the Speedi Boot which consistently required ½ the time needed to access and install the HVAC boot using the conventional blocking and installation techniques. The installers consistently agreed that the adaptability and greater speed on installation was a distinct and significant advantage in favor of the Speedi Boot.

Laboratory Tests to Determine Air Loss

- A. Conventionally Applied Boot: With a constant pressure of 50 pascals in the pressure chamber, the recorded pressure above the boot surface was observed to measure 38 pascals (loss of 76%).
- B. Speedi Boot attachment, with the factory installed dust and debris cover removed: With a constant pressure of 50 pascals in the pressure chamber, the recorded pressure above the boot surface was observed to measure 21 pascals (42% loss).
- C. Speedi Boot attachment, with factory installed dust and debris cover retained: This test was conducted for the purpose of demonstrating the integrity of the dust and debris cover when subjected to significant pressure for a 6 hour interval. At the end of the 6 hour test period, at a continuous chamber pressure of 75 pascals, measurable pressure above the boot assembly was negligible; a differential of 98% (less than 3% loss).

Discussion and Conclusions

The time saving benefits of using the Speedi Boot assembly were easily observed in comparing this system with the conventional, established techniques of blocking and inserting the standard HVAC boot. Because of the opportunity to omit the preparation of the installation site by blocking and adapting, ease of application using the Speedi Boot was demonstrated consistently. Adaptability and final appearance was judged, preferred.

To a significant degree it was felt that the percentage of air loss (lower pressure differential) could have been affected positively by using mastic to seal the irregular interface created by crimping the boot assembly to the duct in its adaptation to the Speedi Boot (**B.** above). However, even in the absence of that consideration, the greater pressure differential when using the Speedi Boot application, compared to the conventional techniques, demonstrated the superior resistance to air loss of the Speedi Boot system.

The failure resistance of the factory installed, dust and debris covers (when subjected to a 6 hour, 75 pascal exposure), proved very impressive. From the performance in this demonstration, we would anticipate consistent, credible results when carefully conducting duct pressure tests.

In conclusion, both the concept and performance of Speedi Boot have demonstrated features to recommend its application and advantage over the conventional techniques for installation of the HVAC boot. We can, with conviction, say that we see serious potential for this product in the HVAC industry