

# HUSHCORE™ *Deck*™ System Model DS-41 For Rooftop Mounted HVAC Units

## PART 1 – GENERAL

### 1.1 Work Included

- A. The work consists of furnishing a HUSHCORE™ *Deck*™ System Model DS-41 for HVAC units as described in this specification.
- B. In-Curb Acoustical Treatment as shown on the contract drawings, schedule, or as tabulated shall be installed in each RTU curb to reduce the noise levels from Rooftop Air Handling Equipment radiating through the curb to the occupied spaces below.

### 1.2 Submittals

- A. Include construction details, materials, dimensions of individual components and profiles and finishes.
- B. Detail fabrication including anchorages and attachments to structure and to supported equipment.
- C. Copy of ASTM E-90-10 test results from an independent lab shall be included in the submittal.

### 1.3 Quality Assurance

- A. Company specializing in the manufacture of acoustical and vibration systems and equipment/related accessories with not less than 30 years documented successful experience for work comparable to work of this project.
  - 1. All component products outlined in this specification shall be furnished by a single supplier.
- B. The *Deck*™ System shall be supplied with the packaged air handling unit equipment.

## PART 2 – PRODUCTS

### 2.1 Manufacturers

- A. **BRD Noise and Vibration Control, Inc.**, PO Box 127, 112 Fairview Avenue, Wind Gap, PA, 18091, Phone: 610-863-6300, Fax: 610-863-4230, E-mail: [info@brd-nonoise.com](mailto:info@brd-nonoise.com), Website: [www.HUSHCORE.net](http://www.HUSHCORE.net) .
- B. Exceptions must be submitted and approved 10 days prior to project bid date as “or equal” compliant.

## 2.2 HUSHCORE™ Model DS-41 In-Curb Composite Acoustical Treatment

### A. HUSHCORE™ DS-41 acoustical composite

1. The overall installed composite shall have an installed thickness of 4” for the DS-41 composite.
  2. The composite panels shall get HUSH SEALANT™ model HSAC-100 acoustical grade caulk at seams and all perimeter edges inside the curb
  3. Seams for each layer shall be staggered
- B. For use in plenum curbs where the acoustical treatment is exposed to the air stream, model DS-49 shall be supplied. The DS-49 in-curb is also rated Class “A” for flammability per ASTM E-84 testing.

## 2.3 HUSHCORE™ In-Curb Composite Acoustical Treatment Performance

- A. The combination of all layers shall be tested for Sound Transmission Loss in accordance with procedure ASTM E-90-10. The assembly shall be rated at not less than STC-41 with 1/3 octave performance values as listed below for sound radiation through the deck inside the curb.

Freq. (Hz) TL (dB)	<u>80</u> 13	<u>100</u> 13	<u>125</u> 18	<u>160</u> 20	<u>200</u> 25	<u>250</u> 40	<u>315</u> 48	<u>400</u> 52	<u>500</u> 56	<u>630</u> 58	<u>800</u> 60	<u>1K</u> 58
Freq. (Hz) TL (dB)	<u>1250</u> 60	<u>1600</u> 60	<u>2000</u> 61	<u>2500</u> 62	<u>3150</u> 65	<u>4000</u> 69	<u>5000</u> 72	<u>6300</u> 72	<u>8000</u> 74	<u>10000</u> 70	<u>STC</u> 41	

- B. Copy of test report by an accredited lab shall be included in the submittals to document the above performance.

## PART 3 – EXECUTION

### 3.1 Decking

- A. Decking shall be maintained inside the RTU roof curb to a clearance of ¼” maximum around all duct drops but never contact the duct.
1. Pack all air gaps around duct drops for return and supply with HUSH BATT™ and seal with HUSH SEALANT™ HSAC-100.

### 3.2 Inspections

- A. The manufacturer or their local authorized agent shall inspect the in-curb deck system work on site prior to lowering of the units and issue a letter of certification stating that the products have been properly installed and sealed around all ductwork and drops to eliminate air gaps which can compromise performance.