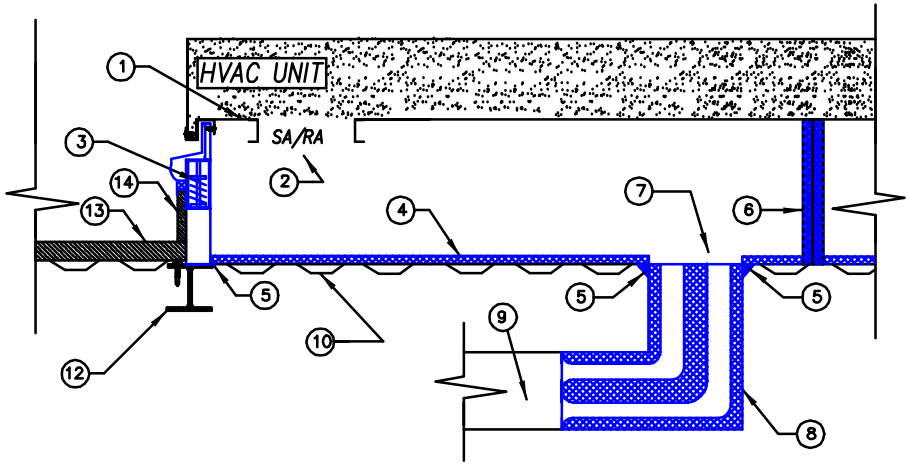
# HUSHCORE™ *WHISPER™ "E"* SYSTEM MODEL *HPC-DS-49-E* PLENUM STYLE ACOUSTICAL VIBRATION CURB




BY RTU UNIT MANUFACTURER

1. RTU Base
2. RTU Openings

BY ACOUSTICAL MANUFACTURER

3. HUSH CURB™ HPC Vibration Roof Curb
4. HUSH GUARD™ HG Modular DS-49 Panelized Floor
5. HUSH SEALANT™ Acoustical Caulk at all Duct Drops & Curb Perimeter
6. Plenum Divider
7. SA/RA Curb Openings
8. HUSH DUCT™ Elbow Silencer

BY HVAC CONTRACTOR

9. Duct Work
10. Roof Deck Flashed to within $\frac{1}{4}$" of all Duct Drops but not in contact with Duct Wall
11. Submit Letter of Certification from Acoustical Supplier following Inspection

BY GENERAL CONTRACTOR

12. Building Steel
13. Built-up Roof or Concrete
14. Insulation and Cant Strip
15. Curb Slope requirements where applicable

## RTU NOISE REDUCTION SYSTEM

HUSHCORE™ ***WHISPER™ "E"*** System Model ***HPC-DS-49-E*** shall be a 2" deflection, fully adjustable and fully assembled Plenum Curb System with integrated HUSH DUCT™ SA and RA Silencers. The completely isolated top and bottom steel structural frames shall have a continuous flexible weatherseal. The system shall be capable of serving as a blocking device during installation. The springs shall have built-in limit stops to snub out wind resistance. Model ***HSPC-DS-49-E*** incorporates seismic construction. The HUSH CURB™ shall be 24" high minimum or as shown on the drawings and shipped completely assembled. Factory curbs with a secondary vibration rail kit are not acceptable. Supply and Return air inside the curb shall be segregated by a plenum divider.

The HUSH CURB™ shall have a model ***DS-49*** panelized acoustical floor sound package for radiated noise. Materials shall meet Class "A" per ASTM E84 for flammability The ***DS-49*** Acoustical Panelized Floor shall have transmission loss ratings as listed below in accordance with ASTM-E-90-10. HUSH DUCT™ Silencers are shipped Loose for SA and RA. Coordinate silencer sizes and configuration as well as curb bottom openings with building ductwork. A letter of certification shall be issued by the acoustical system supplier stating the complete system has been properly installed prior to setting the units. Products and systems shall be by BRD Noise and Vibration Control, Inc., Wind Gap, PA - (610) 863-6300, www.HUSHCORE.net

## PERFORMANCE

To assure optimized aerodynamic and acoustic performance as well as proper integration and coordination of the final installation, the HUSHCORE™ System shall be supplied by the rooftop unit manufacturer as part of a turnkey package. The HUSH CURB™ shall provide minimum 85% vibration isolation efficiency. HUSHCORE™ Model ***HPC-DS-49-E*** Plenum Style Acoustical/Vibration Curbs shall be tested in accordance with procedure ASTM E-90-10. The assembly shall be rated at not less than STC-49 with 1/3 octave performance values as listed below for sound radiation through the deck inside the curb.

| HUSHCORE™ Panelized Acoustical Floor - (Transmission Loss) in accordance with ASTM E-90-10 | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Freq. (Hz) | 80 | 100 | 125 | 160 | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 1K | 1.25K | 1.6K | 2K | 2.5K | 3.15K | 4K | 5K | 6.3K | 8K | STC |
| Transmission Loss (dB) | 17 | 20 | 25 | 31 | 33 | 39 | 43 | 48 | 51 | 54 | 55 | 59 | 62 | 63 | 62 | 63 | 64 | 67 | 66 | 70 | 74 | 49 |

Sound Pressure Levels at the ***HPC-DS-49-E*** SA Silencer Exit & RA Silencer Inlet shall be as per Octave Band dB Levels and Overall dBA levels shown below:

| Sound Pessure Levels with HUSHCORE™ ***HPC-DS-49-E*** SA & RA at Deck Openings | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Freq. (Hz) | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | dBA |
| SUPPLY | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] |
| RETURN | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] |