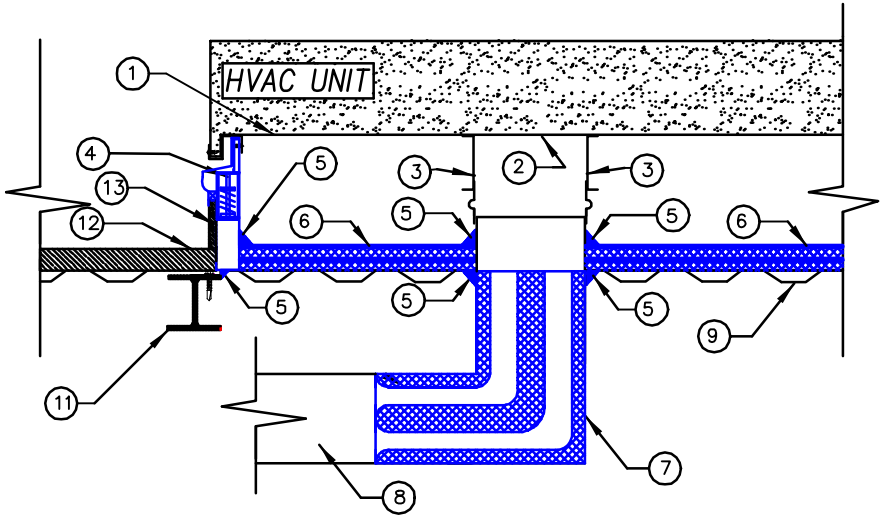
# HUSHCORE™ *PLUS™ "E"* SYSTEM MODEL *HIC-DS-41-E* INTEGRATED ACOUSTICAL VIBRATION CURB




BY RTU UNIT MANUFACTURER

1. RTU Base
2. SA/RA Unit Openings

BY ACOUSTICAL MANUFACTURER

3. Integral Curb Duct Supports
4. 2" Deflection Fully Assembled HUSH CURB ™ Model HIC
5. HUSH SEALANT™ Acoustical Caulk at all Duct Drops & Curb Perimeter
6. HUSHCORE™ DS-41 Deck System In-Curb Acoustical Treatment
7. HUSH DUCT™ Elbow Silencer

BY HVAC CONTRACTOR

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

BY GENERAL CONTRACTOR

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

APPLICATION: Recommended for Rooftop units 20 tons and larger above a moderately noise sensitive space or where indicated on the RTU schedule/ drawings.

RTU NOISE REDUCTION SYSTEM

HUSHCORE™ ***PLUS™ "E"*** System Model ***HIC-DS-41-E*** shall be a 2" deflection, fully adjustable and fully assembled 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 ***HSIC-DS-41-E*** incorporates seismic construction. The HUSH CURB™ shall be 24" high and shipped completely assembled. Factory curbs with a secondary vibration rail kit are not acceptable.

The HUSH CURB™ shall have a field installed in-curb ***DS-41*** sound package for radiated noise. The multi-layer composite system shall have a nominal installed height of 4" with transmission loss ratings as listed below in accordance with ASTM-E-90-10. HUSH DUCT™ Silencers are shipped loose for SA & RA. HUSH SEALANT™ model HSAC-100 acoustical grade caulk shall be used around all curb perimeter edges and around all curb openings as detailed above after decking is flashed to within $\frac{1}{4}$" without contacting the duct wall. Coordinate silencer sizes and configuration as well as curb bottom openings with building duct work. 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 ***HIC-DS-41-E*** In-Curb Acoustical Treatment Performance shall be tested 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.

| HUSHCORE In-Curb Composite - (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) | 13 | 13 | 18 | 20 | 25 | 40 | 48 | 52 | 56 | 58 | 60 | 60 | 61 | 62 | 62 | 62 | 65 | 69 | 72 | 72 | 74 | 41 |

Sound Pressure Levels at the ***HIC-DS-41-E*** SA Silencer Exit & RA Silencer Inlet shall be as per Octave Band dB Levels and Overall dBA levels shown below:

| Sound Pressure Level with HUSHCORE™ ***HIC-DS-41-E*** at Silencer Openings | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Freq. (Hz) | 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | dBA |
| Supply | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] |
| Return | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] | [ ] |