



BRD

Noise and Vibration Control, Inc.

112 FAIRVIEW AVE., P.O. BOX 127, WIND GAP, PA 18091-0127 - 610-863-6300 FAX: 610-863-4230
 E-mail: brd@epix.net Web: www.brd-nonnoise.com

**HUSHCORE™ NOISE REDUCTION SYSTEMS
 FOR AIR COOLED CHILLERS**

HUSHCORE™ System	Treatment Strategy						Typical Noise Reductions	Application Guidelines
	Source Control			Direct Path Control				
	HUSH COVERS™ for compressors	HUSH COVERS™ for piping and connected components	HUSH GUARD™ condenser fan panels	HUSH FLEX™ perimeter curtains	HUSH GUARD™ barrier walls			
Economy	X (HC-450-1 1/2")						3 – 5 dBA	Non Critical
Standard	X (HC-450-1 1/2")	X (HC-450-1 1/2")					6 – 8 dBA	Best Value dBA Reduction/\$ Spent
Unitary			X (HG-200)				4 – 6 dBA	Condenser Fan Treatment
Premium				X (EBAC-110R-S)			10 – 12 dBA	Treats Compressors and Condenser Fans
Supreme					X (HG-400)		12 – 15 dBA	Noise Sensitive Projects
Ultimate					X (HG-400)		15 – 20 dBA	Critical Projects

NOTE: For Critical/Custom applications where greater than 18 dBA reductions are necessary or where boundaries are close to equipment, please consult BRD for assistance.



Untreated Chiller Compressors

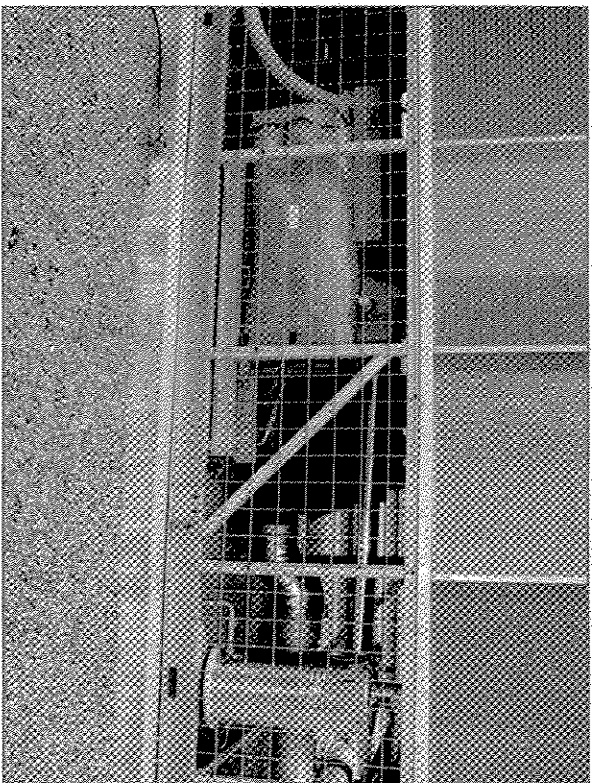
HUSHCORE™ ECONOMY SYSTEM

Air Cooled Chillers

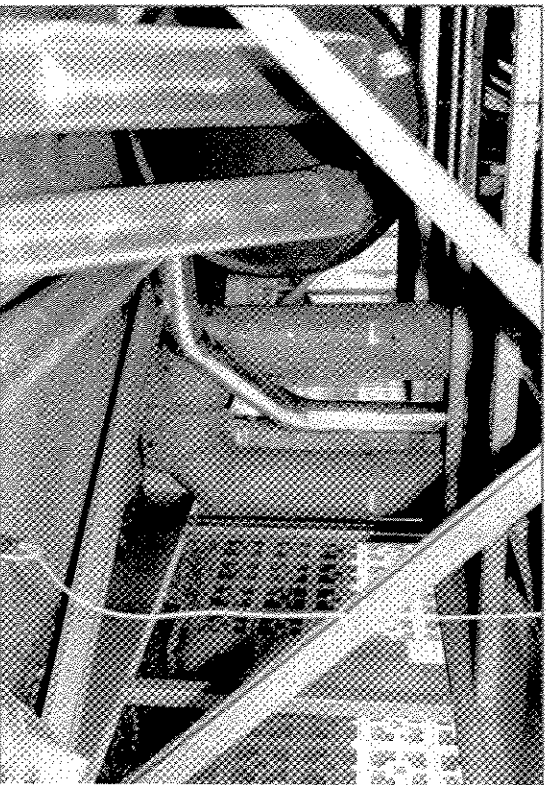
- Source Control
- HUSH COVER™ removable sound blankets
- Compressor only treated
- RTAA chiller model shown
- 3 to 5 dBA typical reduction
- HC-450-1 ½" blanket construction
- Wire tie or "D" ring fastening bands
- Non critical attenuation projects



Chiller with HUSH COVER™ Blankets



RTAC HUSH COVERS™

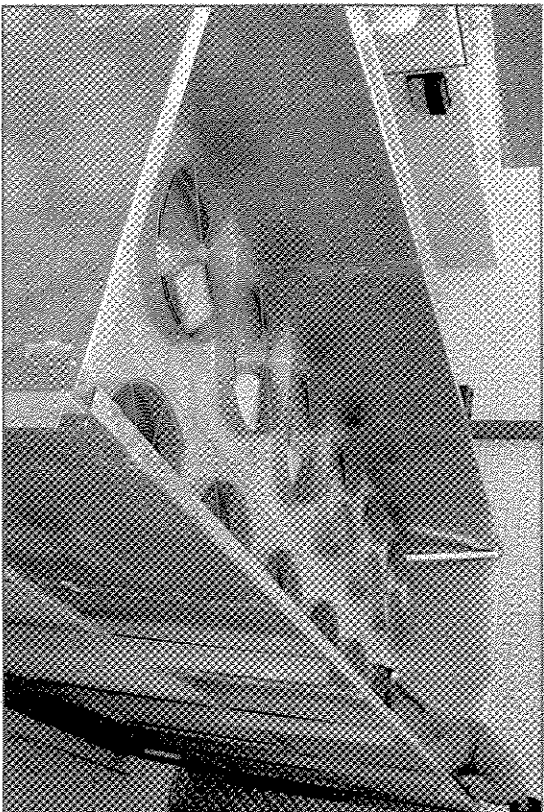


RTAA Oil Separator HUSH COVERS™

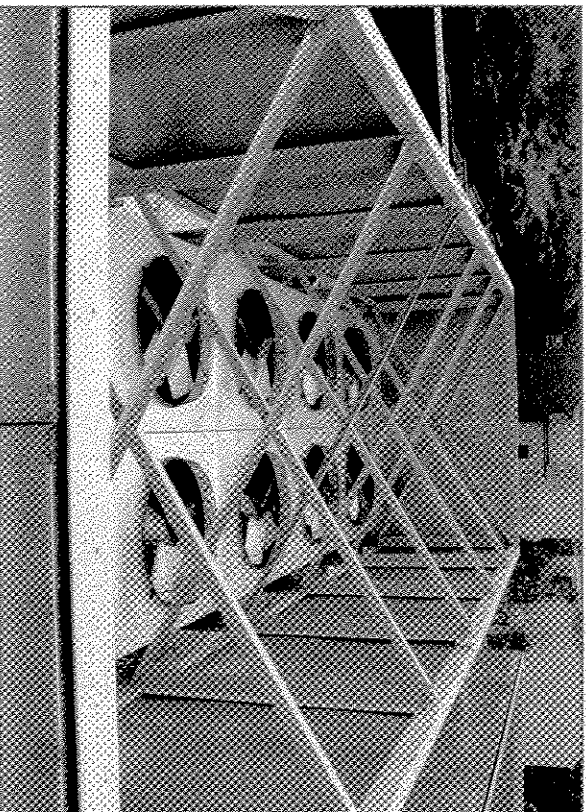
HUSHCORE™ STANDARD SYSTEM

Air Cooled Chillers

- Source control
- HUSH COVER™ Removable Sound Blankets
- Compressor, discharge pipes, oil and vapor separators treated
- RTAA and RTAC chiller models shown
- 6 to 8 dBA typical reduction
- HC-450-1 ½" blanket construction
- Wire tie or D ring fastening bands
- Applications for moderate level of noise reduction



Unitary Panels supported by RTAA unit

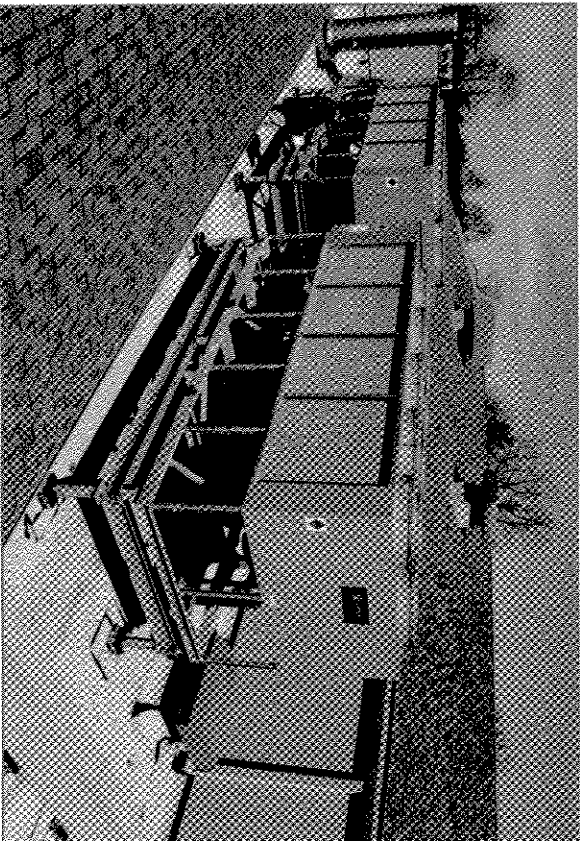


Unitary Panels Independently Supported

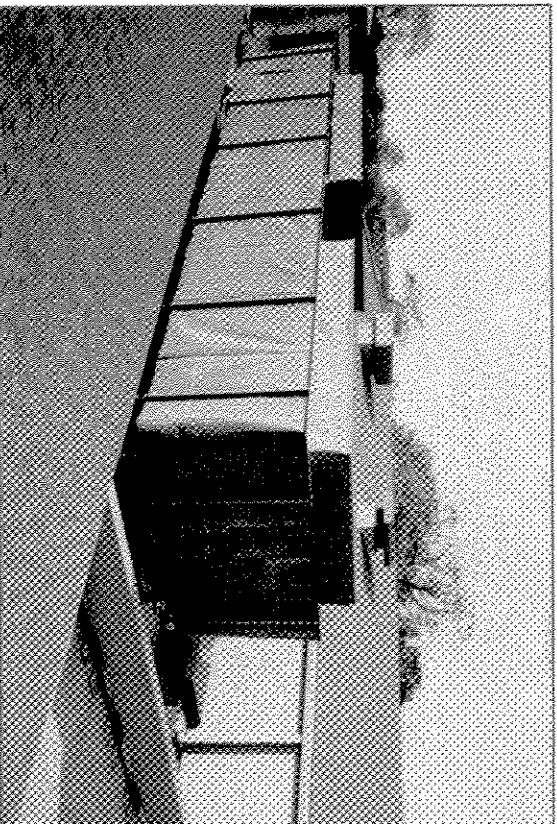
HUSHCORE™ UNITARY SYSTEM

Air Cooled Chillers

- Path Control at the source
- HUSH GUARD™ modular acoustical panels
- Attenuates condenser fan noise
- RTAA chiller shown (top)
- 4 to 6 dBA typical reduction
- HG-200 panel construction
- Outperforms Low Noise Fans
- Minimal pressure loss impact



Untreated Chillers

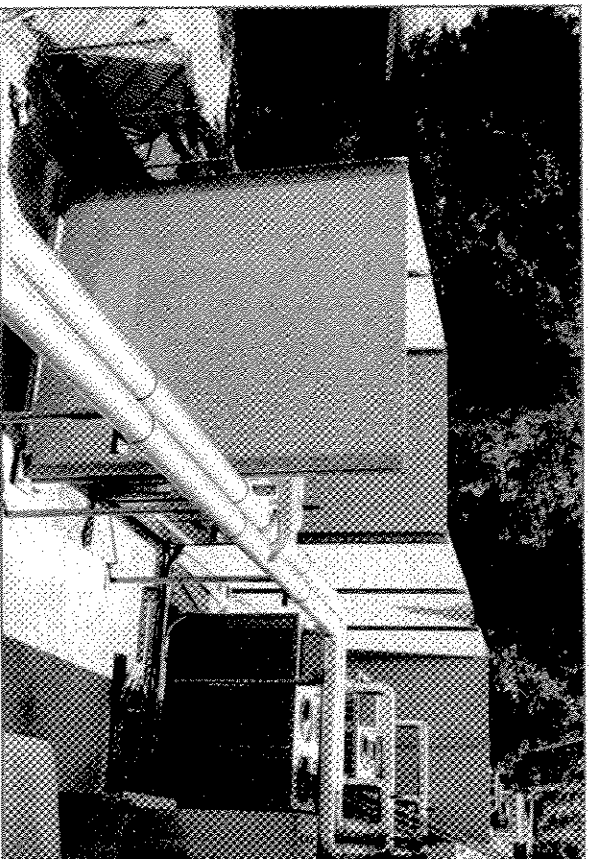


Chillers with HUSH FLEX™ Curtains

HUSHCORE™ PREMIUM SYSTEM

Air Cooled Chillers

- Direct path control
- HUSH FLEX™ acoustical curtain system
- Structural steel support framework or attachment to chain link or other structures
- RTAA chiller model shown
- 10 to 12 dBA typical reduction
- Exterior grade EBAC-110R-S curtain construction
- Applications to attenuate compressor and condenser fan noise



Three 60-ton chillers attain 55 dBA at 10'

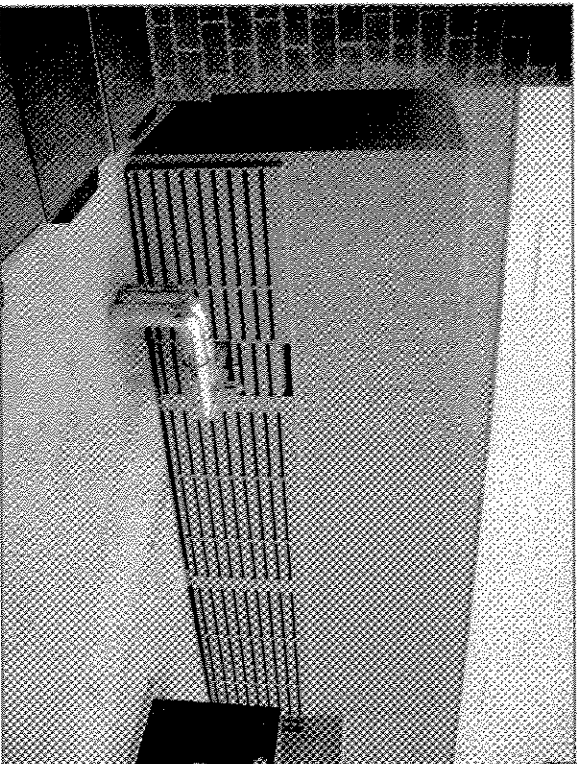


RTAA rooftop unit with HUSH GUARD™ barrier wall

HUSHCORE™ SUPREME SYSTEM

Air Cooled Chillers

- Direct path control
- HUSH GUARD™ modular acoustical barrier wall
- Acoustical panels stacked between structural steel support columns
- 12 to 15 dBA typical reduction
- HG-400 panel construction
- Noise Sensitive Installations
- Height of barrier wall depends on operating clearance around equipment and desired noise reduction.



Ultimate System with recessed fan exhaust baffles



Overhead exhaust parallel baffles shown from inside looking up

HUSHCORE™ ULTIMATE SYSTEM

Air Cooled Chillers

- Direct Path Control
- HUSH GUARD™ modular acoustical barrier wall
- Acoustical panels stacked between structural steel support columns
- Integrated acoustical air intake and parallel baffle exhaust plenum
- 15 to 20 dBA typical reduction
- HG-400 panel construction
- Critical attenuation projects