



# ACOUSTIWEIR™

ACOUSTIC TECHNOLOGY FOR AIR HANDLING UNITS

## Noise reduction without compromise

Sound generated by an air handling unit can have a direct impact on any indoor environment, and is of particular concern for healthcare, education, performing arts and professional office spaces. That's why we engineer industry-leading acoustic performance into every YORK® air handling unit we build.

One of the most significant advances to come from our world-class Acoustics Lab is Acoustiweir™, a technology exclusively engineered by YORK® to reduce sound levels while maintaining a compact unit footprint. Acoustiweir™ is a groundbreaking improvement in air handling sound reduction.

### Acoustic silencing, without the silencer

Traditional noise reduction systems often rely on a series of baffles or silencers inside the air handler to reduce sound levels. Systems that require sound reduction with smaller footprints and higher efficiency levels are good candidates for more advanced technologies like those found in our Acoustiweir™ solution.

### Compact dimensions for more applications

Silencers found in competing air handlers must be applied over large areas for maximum effectiveness. Acoustiweir™

### Vertical/Side Duct Discharge Sound Reduction (Insertion Loss) Value (dB)

OCTAVE	63	125	250	500	1000	2000	4000	8000
DB REDUCTION	0	2	8	8	7	9	10	9

- Typical results for unit airflow between 10,000 – 50,000 CFM
- Negligible pressure drop

### Horizontal Duct Discharge Sound Reduction (Insertion Loss) Value (dB)

OCTAVE	63	125	250	500	1000	2000	4000	8000
DB REDUCTION	0	1	7	6	5	4	4	4

- Typical results for unit airflow between 10,000 – 50,000 CFM
- Low pressure drop ~ 0.10 in s.p.

technology can provide sound attenuation comparable to a 2-3' silencer in only a 4-6" space, providing quiet operation in a more compact system.

### Groundbreaking reduction in pressure loss

Silencers used in typical sound attenuation systems affect both sound and air, creating turbulence in the air stream that causes the system to work harder and become less efficient. Acoustiweir™ is different. A result of proprietary engineering research

at the YORK® Acoustics Lab, Acoustiweir™ is uniquely able to diminish overall system noise with remarkably little change in air pressure.

### Superior sound attenuation

Perforated panels and baskets are another common, inexpensive noise reduction solution. These methods are space-efficient and don't contribute significantly to system pressure loss, but are less effective than Acoustiweir™ in minimizing sound levels in the critical 63-250 Hz range, where low-frequency rumble can cause significant discomfort.

### A YORK® engineered, trademarked technology

Acoustiweir™ from YORK® has been engineered to enable a quieter, more compact and more efficient air handling system. Discover how the leader in air handling acoustics engineers technology to improve your environment – and your bottom line.

## From the leader in AHU acoustics research

Acoustiweir™ technology is a direct result of the groundbreaking air handling research conducted at the YORK® Acoustics Lab, which is part of the Grantley Technology Center in York, Pennsylvania. Backed by parent company Johnson Controls, the YORK® Acoustics Lab is the largest air handling unit sound test facility in the world, and is one of the leading research, development and testing sites for the entire commercial HVAC equipment industry.

### World-class testing facilities

Featuring a 105,000 cu. ft. reverberation room and state-of-the-art equipment capable of capturing frequencies from 25 Hertz all the way up to 10,000 Hertz, the YORK® Acoustics Lab is so advanced it's the only facility of its kind to test airflow and sound simultaneously. In addition, test results from the YORK® Acoustics Lab are backed by world-class accreditation, including unit airflow in accordance with ANSI 210 up to 100,000 CFM, accreditation for fan testing to AMCA 210 and 300, and the use of a reverberation room that is qualified according to AMCA 300 and AHRI 220 specifications. AHRI Standard 260 testing in the AMCA certified YORK® Acoustics Lab also allows us to certify an entire class of air handlers without individual unit testing.

### Industry-leading acoustics experience

With over 75 years of combined HVAC acoustic design experience, the YORK® Acoustics Lab team has engineered solutions for some of the industry's most challenging requirements. Our acoustics and application engineers design units to meet critical sound requirements that include acoustic performance evaluation, airflow and power use.

A growing body of research is validating the importance of acoustics in nearly every facet of our daily lives. That's why we develop advanced acoustic technologies like Acoustiweir™. And that's why YORK® engineers industry-leading acoustic performance into every air handler we build.



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