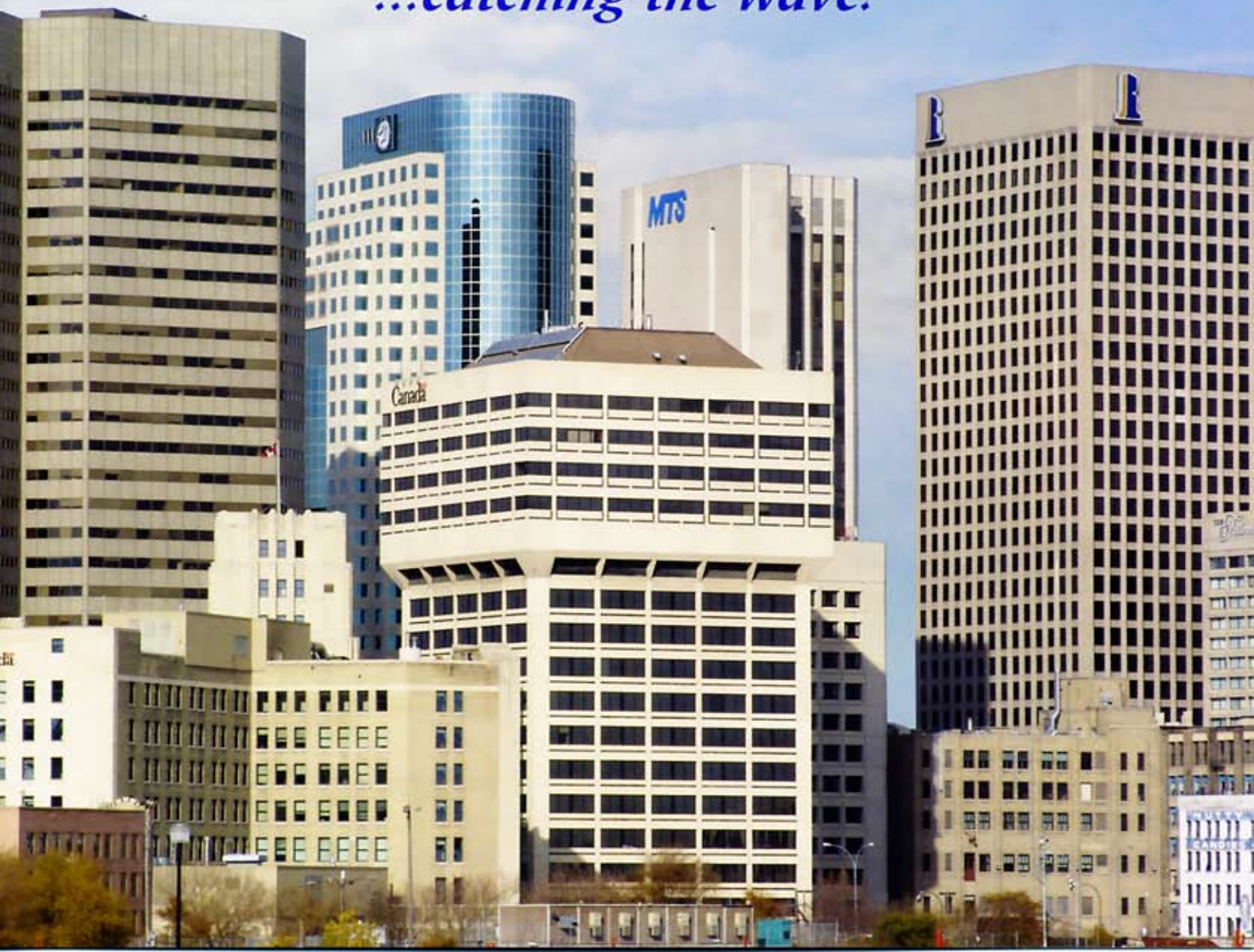




COMMERCIAL NOISE CONTROL PRODUCTS

...catching the wave!



A TRADITION OF EXCELLENCE

MEETING THE CHALLENGE

...it's in everything we do.



Lucent Technology - Factory Test Setup.

Meeting the Challenge of Change...

VAW Systems is a leading designer and manufacturer of Noise Control products. This heritage of excellence in application engineering, product design and manufacturing is kept up to date with continued research and development.

VAW Systems has close association with both Architectural and Consulting Engineering firms in the design and construction of noise control systems for buildings. Successful projects result when noise control is treated as part of the total building system at the design stage and not as a piece of unrelated equipment. Just as building style, function and space utilization require an overall view; several types of noise control products may be necessary to match the specific system design. Compromising the noise control product selection will adversely affect the noise criterion required.



Inlet view of a Radial Inlet Silencer (RIS).

Meeting the Challenge of Innovation...

VAW Systems uses a systems approach to acoustics, we evaluate each of the components of the mechanical system to assure optimum product application, selection and design. This total systems approach allows "Continuous Improvement" of VAW products to successfully meet the demands of the ever changing market.

VAW Systems' acoustic and aerodynamic database has been compiled from numerous tests performed in house and at independent laboratories, to the ASTM E-477 sound standard and other applicable testing standards.

Meeting the Challenge of Quality...

VAW Systems has earned a reputation as the quality choice in the noise control industry based on innovative design, selection software, competitive pricing, project management and compliance with certified Quality Assurance and Welder Qualification Programs. Successful Quality Assurance is a corporate philosophy which is executed from the contract bidding stage to final shipment and installation of the equipment. VAW is ISO 9001 certified and qualified to CWB and AWS welding standards. The quality system at VAW has passed many rigorous internal and external audits, performed by our customers.

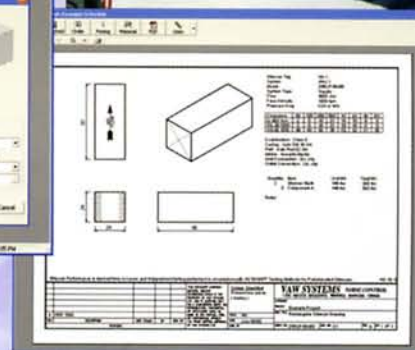
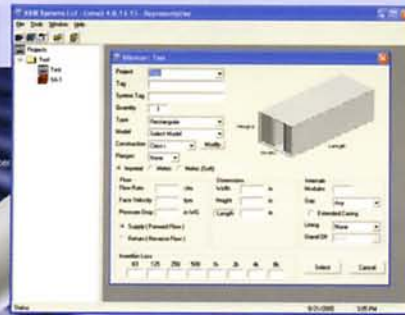


TECHNOLOGY & TECHNIQUE

VAW achieves excellence with the right combination of inspiration, innovation, passion and spirit.

Customer Support

Fundamental to the success of VAW Systems is the project management concept. Our mandate is excellence in client communication, cost management, scheduling and co-ordination of all project activities.



COMSIL: Silencer Selection Software

Years of experience have enabled VAW Systems' application engineers to develop sophisticated computer programs, minimizing expensive product design and engineering time. Representatives and engineers agree that the COMSIL selection software is second to none. This affords our representatives and engineers the capability of generating silencer selections, acoustical duct analysis, pricing and drawings right at their fingertips.

Meeting Our Customers Needs:

- Acoustical Performance
- Aerodynamic Requirements
- Structural Requirements
- Cost Effective and Competitive
- On Time Shipping and Delivery
- Easy to Use Software

Modern Production Facility

VAW Systems' multi-skilled unionized personnel utilize a modern 64,000 sq.ft. manufacturing facility in Winnipeg, Manitoba, Canada.

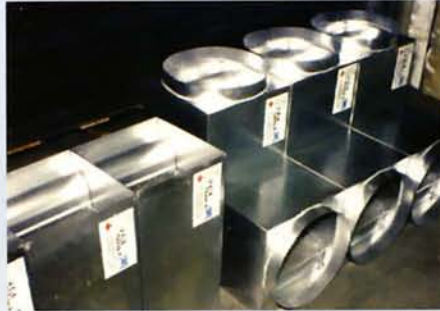


VAW Systems' 64,000 sq. ft. Winnipeg production facility

STANDARD SILENCERS



RLP - Rectangular Silencers

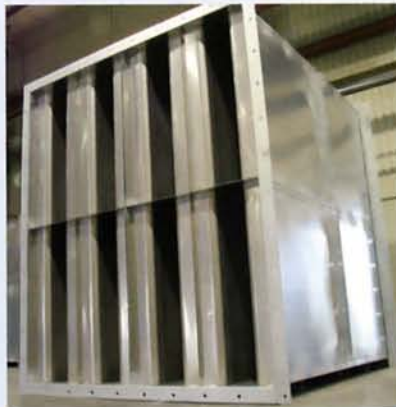


REL - Elbow Silencers with round duct connections



REL - Elbow Silencers with unequal leg lengths

VAW Systems offers a variety of duct configurations which can be selected in the COMSIL software by representatives and engineers. All of the duct silencers that VAW offers are sized to match the job site duct dimensions eliminating the need for transitions between the ductwork and the silencer. All silencers are designed to maximize low frequency attenuation and minimize system effects with the lowest pressure drop.



RMP - Rectangular Silencer comes with Flanges, Stainless internals and Galvanized Casing

Rectangular Models:

- RLP, RMP, RPG
- Used in high, medium and low velocity applications

Elbow Models:

- REL
- Used in high, medium and low velocity applications

Circular Models:

- CLP, CPG & CSI
- Used in high, medium and low velocity applications
- CSI - Low cost silencer consisting of center-body with/ without single outer wall - good for existing ductwork applications



CPG - Circular Silencers



ACS-Axial Cone discharge with high frequency splitters

ACS - Axial Cone Silencer:

- Designed for direct connection to the inlet or outlet of an axial flow fan.
- Aerodynamically matched to the fan to maximize system static regain for lowest possible pressure drop and maximum insertion loss.

Reactive / Packless Models:

- Suitable for use in hospital, clean room and fume hood exhaust where acoustic media is not acceptable.
- NMR - Rectangular configuration
- NMRE - Elbow configuration
- CNMR - Circular configuration
- CNMRE - Circular elbow configuration

CUSTOM SILENCERS



Transitioning RMP's with access section



RPG with mitered inlet connection



RMP transition with bypass opening

VAW Systems is a leader in the Custom Noise Control Industry. Computational Fluid Dynamic (CFD) software and in-house acoustical analysis programs are applied to design unique solutions for the customers' specific needs.

Design Considerations:

- Maximum insertion loss
- Minimal pressure drop
- Work within allowable space constraints
- Access requirements for fire dampers / fusible links
- Transitioning silencers to match changing ductwork dimensions
- Competitive Design / Best Price



Transitioning NMR silencer for kitchen exhaust with removable casings for cleaning

Standard / Custom Silencer Construction:

- All silencers are available in a variety of material gauges
- Material types range from Galvanized, Hot Rolled Steel, Aluminum and Stainless Steel.
- Absorptive Media can range from formaldehyde Free Fiberglass to High Temperature rated Acoustic Media
- All silencers come standard with a 2 inch slip connection on both ends.



Transitioning REL with HTL casing



RLP and CPG packaged for delivery

Standard / Custom Silencer Options:

- Film Liners – Polyvinyl or Fiberglass Cloth
- Extended Casings for improved low band performance and low pressure drop applications
- HTL (High Transmission Loss) Casings to help minimize / reduce breakout of noise through silencer casings.
- Flange / Slip & Drive / TDC Connections.

PANELS, LOUVERS, CROSS-TALK SILENCERS



Acoustic Panels / Enclosures

VAW Systems offers 2 and 4 inch thick tongue and groove acoustical panels. These panels can make a simple barrier wall, an HVAC plenum, or a complex enclosure for noisy equipment such as a compressor. VAW meets the customer's needs when it comes to providing panels / enclosures. Packages can be shipped knocked down for field assembly or fully assembled with the equipment factory installed. Industrial or Power Plant applications requiring panels or enclosures can be supplied by our Industrial and Gas Turbine divisions.

Materials of Construction:

- Hot rolled steel, galvanized, stainless and aluminum
- Structural floors
- Internal structural support steel



Accessories:

- Installation manual
- Access door / panels
- Ventilation packages
- Isolation bases
- Electrical / lighting systems



Acoustic Louvers:

- Available in 4 to 24 inch depths
- Dimensions to suit site requirements
- Materials - galvanized, hot rolled, stainless steel and aluminum
- Paint finishes also available

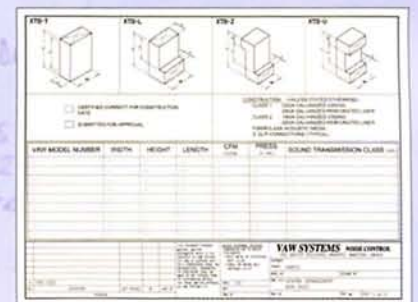


Custom formed curved panels

Acoustic Louver Bank

Cross-Talk Silencers:

- Manufactured in "T", "L", "Z" and "U" configurations
- Shape is dictated by the building wall construction details.
- This type of attenuation will allow for transfer of air but not sound
- Installed in the wall or ceiling space between offices



Cross-Talk general arrangement drawing

ANN-1 HOT DECK SUPPLY
ANN-1 COLD DECK SUPPLY
ANN-1 RETURN
6 EXHAUST INLET
ANN-2 HOT DECK SUPPLY
ANN-2 COLD DECK SUPPLY

APPLICATIONS



Slide-in baffles for existing ductwork



Slide-in baffles for AHU silencer sections



ACS Discharge & Return Silencers designed for 80,000 CFM



RIS - Radial Inlet Silencer

Noise Control is Required in a Variety of Applications:

- HVAC Systems in schools, offices and hospital buildings
- Ventilation in Subway and Traffic Tunnels
- Process air in Industry
- Power Generation Systems



Level 3 Clean Room Protocol Packaging



Flex Connections and Isolation



Fan Roll Out Assemblies



Support Legs



Transitions

Clean Room:

VAW Systems has the ability to handle all of your Clean Room application needs, from preliminary design to being able to manufacture and ship the final product to the Clean Room protocol required.

- Class 10,000 Clean Room used throughout the fabrication, final assembly and packaging stages.
- 3 Levels of Clean Room protocols to suit customer requirements.
- Products are packaged to maintain the level of cleanliness specified during and prior to installation.

Clean Room Projects:

- Nortel Networks
- Motorola
- Applied Materials
- IBM

Accessories:

VAW Systems can also package the accessories required to complete the Noise Control system.

- Fan roll out assemblies
- Paint Finishes
- Flex Connections
- Isolation / Rubber Mounts
- Support legs / stands / brackets
- Transitions to mate the new / existing ductwork with the sound silencers.

VAW Systems strives for excellence in adapting to customers' Noise Control and Filtration needs with proven custom products and unique computerized engineering solutions.



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