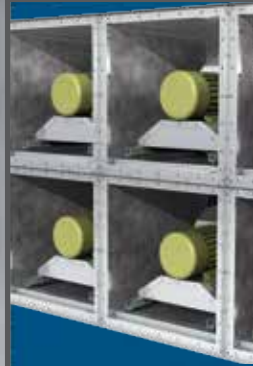
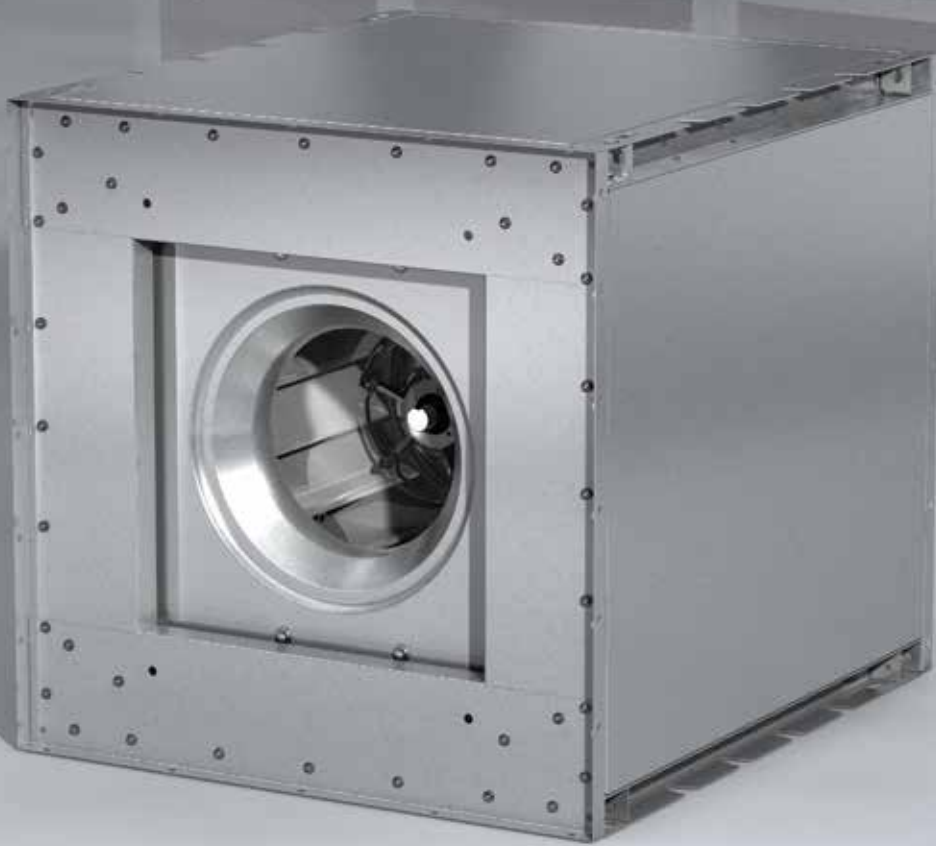


Housed Plenum Fans

Model HPA

Direct Drive



 **GREENHECK**
Building Value in Air.

October
2012

Quiet & Efficient HPA Plenum Fans

Greenheck's housed plenum fan, model HPA, is designed and engineered to provide superior performance and reliability in commercial or industrial applications. Greenheck's products are manufactured with state-of-the-art laser, forming, spinning and welding equipment and endure quality control testing to ensure trouble free start-up. The HPA can be used as a single fan in a sound critical application or in parallel to construct a fan array system. The HPA features a modular design with a structural housing that allows multiple modules to stack side-by-side and on top of one another to form an array.



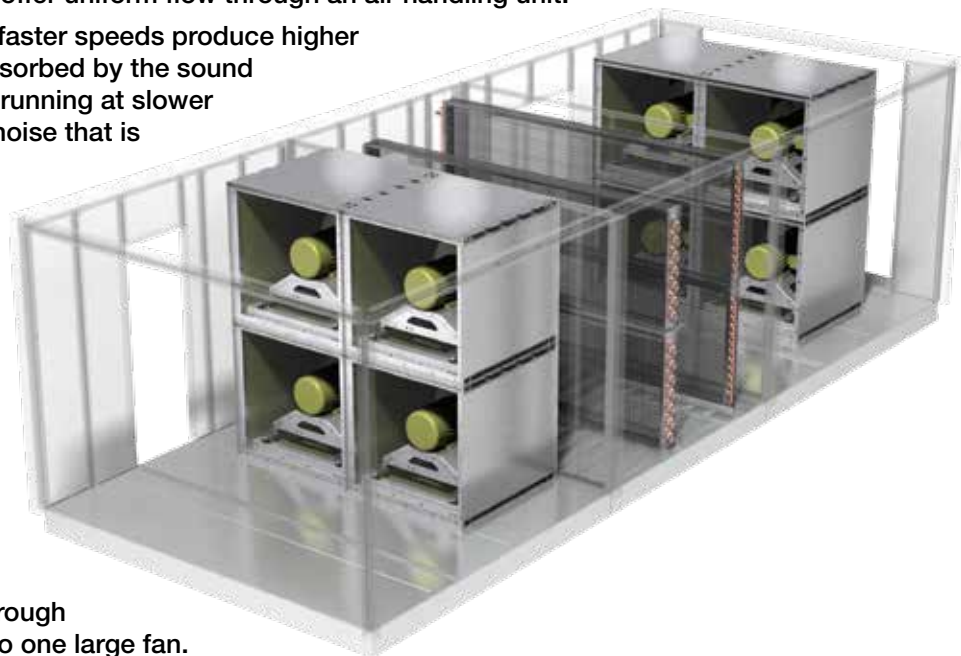
Typical applications include:

- Packaged air handlers
- Built-up air handlers
- Custom air handlers
- General supply and return systems
- Retrofit projects

Fan Arrays

When used in a fan array, the HPA fan offers several advantages over a standard (large) plenum fan:

- Multiple fans stacked in parallel offer uniform flow through an air handling unit.
- Multiple smaller fans running at faster speeds produce higher frequency noise that is easily absorbed by the sound attenuating housing. Large fans running at slower speeds produce low frequency noise that is hard to attenuate.
- Fan arrays have a shorter axial length, minimizing the footprint of the fan space.



Retrofit Applications

In addition to the new construction market, the HPA is a great solution for replacement or retrofit projects.

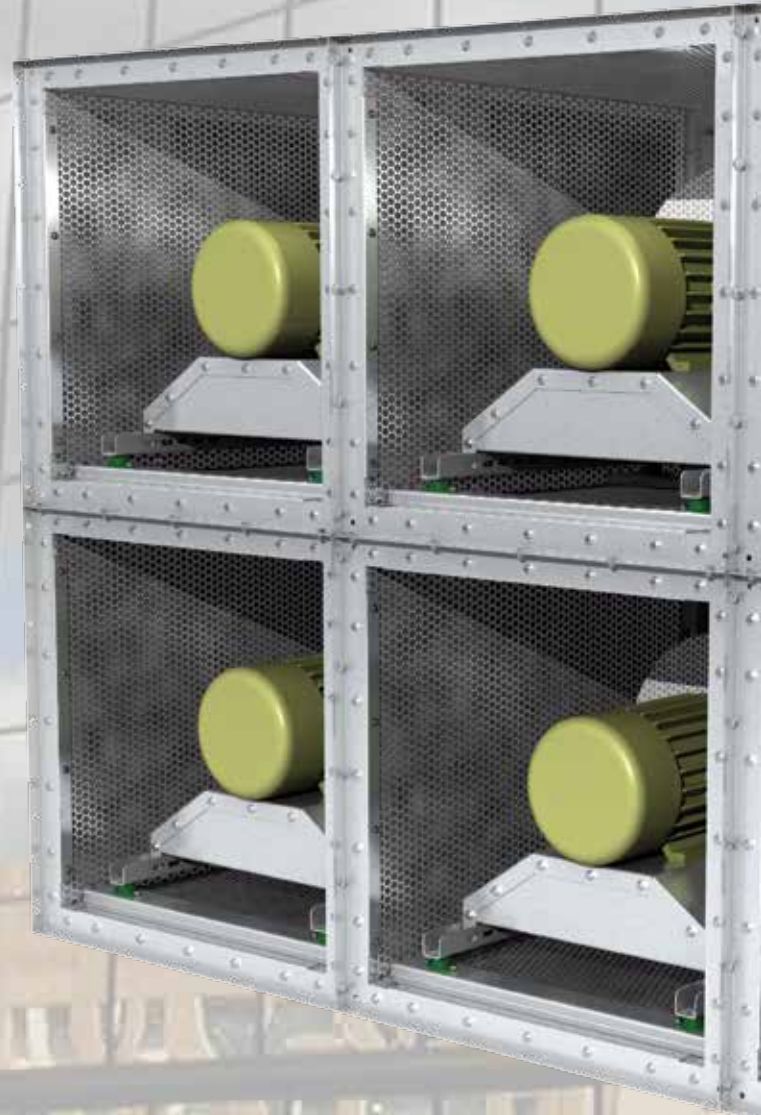
- The small, lightweight design makes the HPA easy to move through doors and elevators compared to one large fan.
- The modular construction of the HPA makes installation easy compared to field assembling a large fan with custom split housings, reducing labor costs.
- Utilizing multiple fans with smaller, lighter motors eliminates the need for cranes and lifting equipment during installation.
- The number and size of fans can be optimized to deliver the required airflow and fit in the existing location.

Sound Attenuating Housing

The fan assembly is mounted inside a sound attenuating housing. The housing has a perforated galvanized inner liner that directs sound waves into two inches of sound absorbing fiberglass between the inner liner and the solid outer shell. The result is a reduction of sound levels.

Galvanized Construction

The fan assembly and sound attenuating housing are constructed of laser cut and die-formed heavy-gauge galvanized material.



Internal Vibration Isolation

Neoprene isolators mounted between the fan assembly and the sound attenuating housing reduce vibration, eliminating the need for isolators and gaskets between modules. Flexible gasket material between the inlet cone and sound attenuating housing creates an airtight seal.

Housing Options

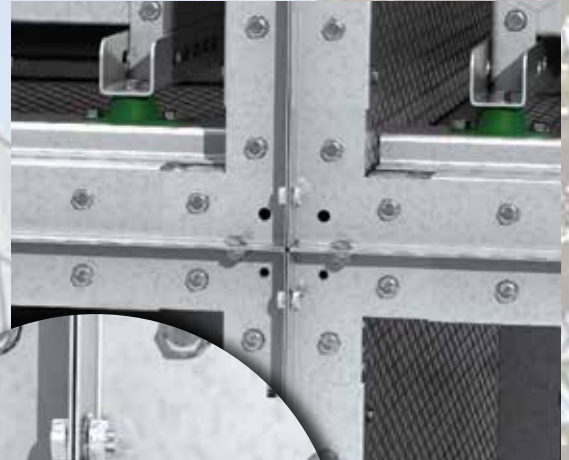
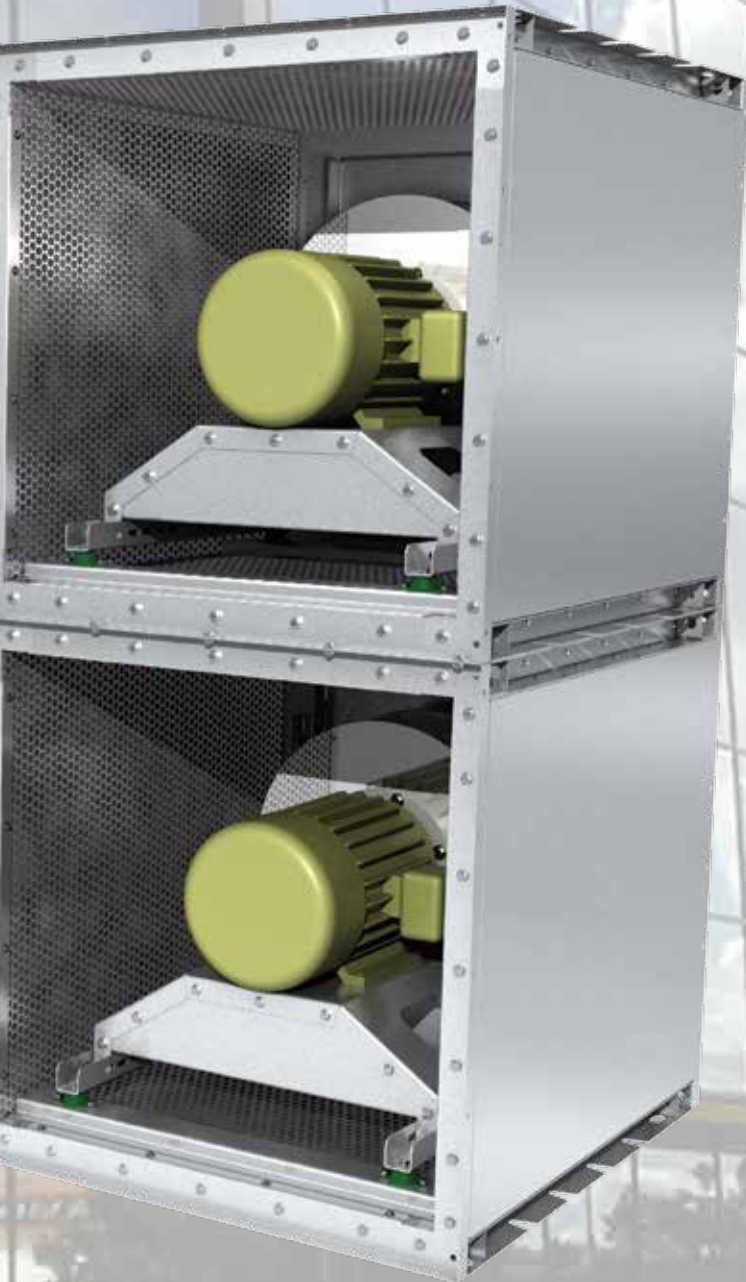
Three different sound attenuating housing sizes makes the sizing the HPA extremely flexible. The standard housing is sized for optimum performance versus footprint. The compact housing offers a smaller footprint for applications with space constraints and the large housing offers increased air performance for higher efficiencies.

Low Maintenance

The HPA is a direct drive fan so there are no belts, sheaves or fan bearings to tension, replace or lubricate. Lubricating the motor bearings is the only maintenance required.

Modular Construction

The lightweight design makes the HPA easy to transport and stack. There are no fasteners on the external casing, making it clean and easy to install. Inlet and outlet flanges makes connecting adjacent units quick and easy.



12-Bladed Aluminum Airfoil Wheel

The HPA features a high efficiency, low sound 12-bladed airfoil wheel. The aluminum wheel reduces start-up torque requirements, as well as shaft loading during operation. The airfoil blades are constructed of 6063-T5 aluminum extrusions to improve efficiency and reduce vibration. All wheels are balanced to grade G6.3 per ANSI S2.19.



Partial Width Wheels

Wheels are available from 50% to 100% for optimum performance and flexibility.

Outlet Guard

To protect the outlet of fan. Guard is removable to easily service or replace the motor.

Blank-off Panel

A blank-off panel is a cost-effective way to prevent backflow of air through a fan if the fan is taken out of service. One blank-off panel would be used per fan array instead of a backdraft damper on each fan. There is no pressure drop associated with the blank off panel since it isn't installed until the fan is down. The blank-off panel must be installed manually.



Blank-off Panel

Inlet Damper

An EM-32 backdraft damper installed on each fan will prevent backflow of air if a fan should be taken out of service. The backdraft damper will close automatically without manual intervention.



Inlet Damper

Inlet Guard

A galvanized low-pressure loss guard that protects the inlet of the fan.

Sure-Aire™ Flow Monitoring System

Sure-Aire provides real-time flow measurement for use in building automation systems. The Sure-Aire's non-invasive design is accurate to within 3% and does not impact fan performance.



Inlet Guard and Sure-Aire™ Air Flow Monitoring System

Extended Lube Lines

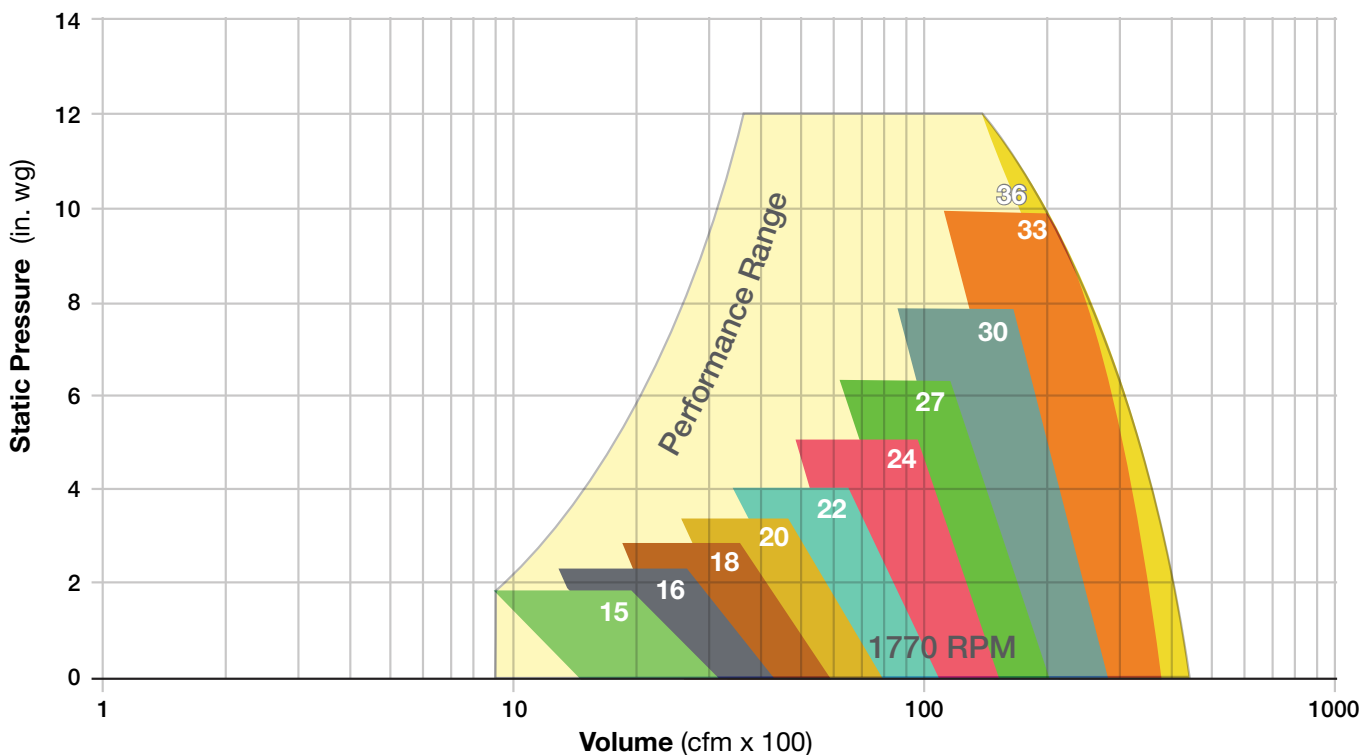
Lubrication lines can be extended from the motor to the outside of the sound attenuating housing. This allows for easy motor bearing lubrication without having to remove guards or reach inside the housing.

Shaft Grounding Rings

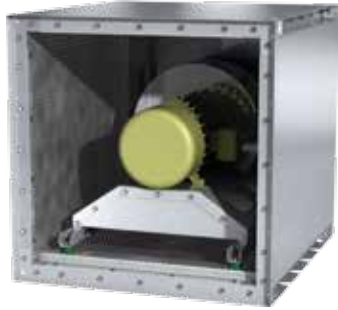
Factory-installed shaft grounding rings ensure motor bearing protection from variable frequency drive (VFD) induced shaft currents.

HPA Performance (single fan)

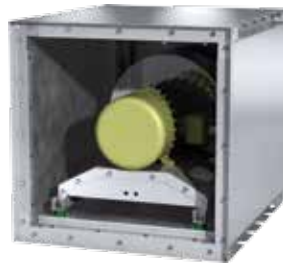
For multiple fans in an array, multiply the single fan performance by the number of fans to get the total CFM.



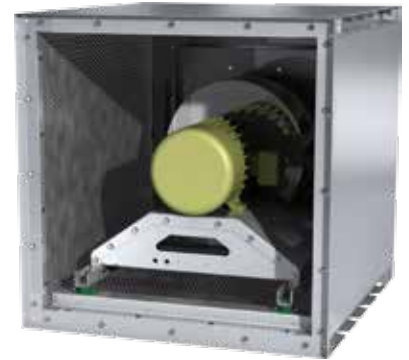
Housing Flexibility



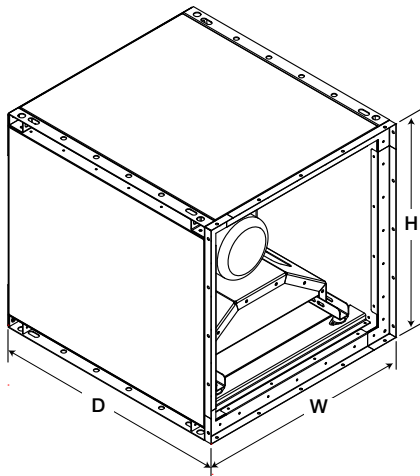
Standard is sized for optimum performance versus footprint.



Compact offers a smaller footprint than the standard housing for applications with space limitations.



Large offers improved air performance for applications that require high efficiency.



Dimensions are in inches.
 ^Does not account for motors or accessories.
 *Weight is less motor.

Wheel Size	Standard Housing					Weight* (lbs.)
	W	H	D^	Maximum Stacked Modules	Maximum Motor Frame	
15	29.00	29.00	32.06	4	215T	215
16	31.50	31.50	37.00		256T	250
18	34.38	34.38	38.19	3	256T	290
20	37.25	37.25	39.56		256T	340
22	41.00	41.00	42.19		286T	380
24	44.75	44.75	43.75	2	286T	425
27	48.94	48.94	47.56		286T	680
30	53.81	53.81	48.94	2	326T	820
33	58.81	58.81	51.06		326T	960
36	64.56	64.56	51.06		326T	1100

Wheel Size	Compact Housing					Weight* (lbs.)	Large Housing					Weight* (lbs.)
	W	H	D^	Maximum Stacked Modules	Maximum Motor Frame		W	H	D^	Maximum Stacked Modules	Maximum Motor Frame	
15	-	-	-	-	-	-	31.50	31.50	37.00	4	256T	250
16	29.00	29.00	32.06	4	215T	215	34.38	34.38	38.19	3	256T	290
18	31.50	31.50	37.00		256T	250	37.25	37.25	39.56		256T	340
20	34.38	34.38	38.19	3	256T	290	41.00	41.00	42.19		286T	380
22	37.25	37.25	39.56		256T	340	44.75	44.75	43.75	286T	425	
24	41.00	41.00	42.19	2	286T	380	48.94	48.94	47.56	2	286T	680
27	44.75	44.75	43.75		286T	425	53.81	53.81	48.94		326T	820
30	48.94	48.94	47.56	2	286T	680	58.81	58.81	51.06		326T	960
33	53.81	53.81	48.94		326T	820	64.56	64.56	51.06	326T	1100	
36	58.81	58.81	51.06		326T	960	-	-	-	-	-	-

Design and Selection Support



Enjoy Greenheck's extraordinary service, before, during and after the sale.

Greenheck offers added value to our wide selection of top performing, energy-efficient products by providing several unique Greenheck service programs.

- Our Quick Delivery Program ensures shipment of our in-stock products within 24 hours of placing your order. Our Quick Build made-to-order products can be produced in 1-3-5-10- or 15-day production cycles, depending upon their complexity.
- Greenheck's free Computer Aided Product Selection program (CAPS), rated by many as the best in the industry, helps you conveniently and efficiently select the right products for the challenge at hand.
- Greenheck has been Green for a long time! Our energy-saving products and ongoing corporate commitment to sustainability can help you qualify for LEED credits.
- Our 3D service allows you to download, at no charge, easy-to-use AutoDesk™ Revit™ 3D drawings for many of our ventilation products.

Find out more about these special Greenheck services at greenheck.com



To-Scale Drawings and Fan Specifications

To-scale CAD drawings along with detailed centrifugal specifications can be found online at www.greenheck.com or within our Computer Aided Product Selection program (CAPS).



Building Value in Air

Greenheck delivers value to mechanical engineers by helping them solve virtually any air quality challenges their clients face with a comprehensive selection of

top quality, innovative air-related equipment. We offer extra value to contractors by providing easy-to-install, competitively priced, reliable products that arrive on time.

And building owners and occupants value the energy efficiency, low maintenance and quiet dependable operation they experience long after the construction project ends.

Our Commitment

As a result of our commitment to continuous improvement, Greenheck reserves the right to change specifications without notice.

Specific Greenheck product warranties are located on greenheck.com within the product area tabs and in the Library under Warranties.



Prepared to Support
Green Building Efforts

