



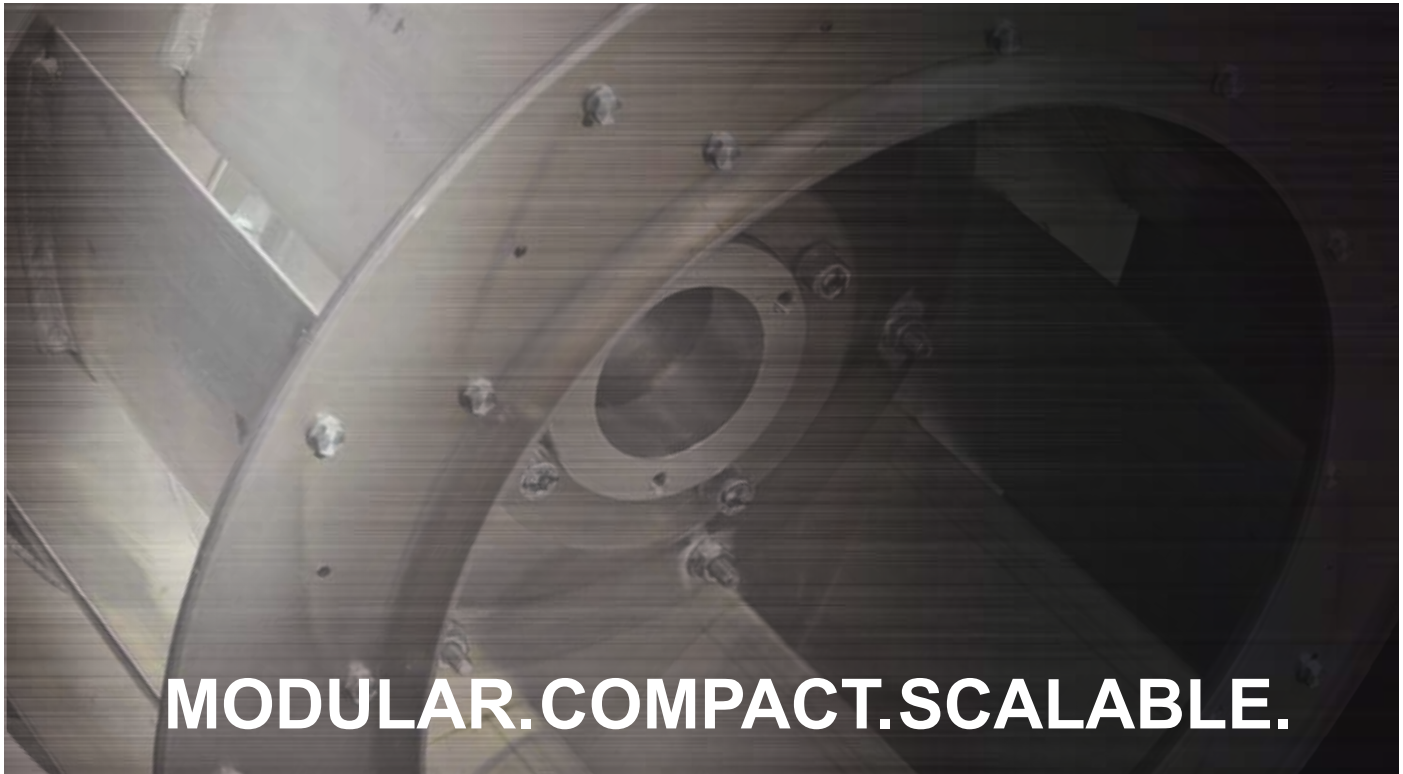
PENNBARRY™

Moving Your Way

Efficient Silent Array™

Advanced Direct Drive Plenum Fans





EFFICIENT SILENT ARRAY

The PennBarry™ Efficient Silent Array™ is a modular, direct drive plenum fan with a flexible and scalable design. Fully capable in standalone applications, the Efficient Silent Array™ excels in a matrix solution to provide increased system performance and maximize system uptime while lowering overall cost.

APPLICATIONS

- Retrofit Applications
- High performance VAV systems
- Air Handlers
- Rooftop units
- General supply and return exhaust
- Telecom data centers
- Clean rooms
- Commercial Facilities
- Hospitals & Healthcare facilities
- Universities & Schools

EFFICIENT SILENT ARRAY ADVANTAGE

Efficient Silent Array™ configurations with designed-in redundancy ensure your system continues to perform to specification even in situations when a single fan in the array is not operating as expected or is taken out of service. This enables you to plan and schedule system maintenance during off-peak hours or when it is convenient for you.

- Scalable, your Efficient Silent Array™ works well in standalone applications but is designed to scale with your needs. Its modular and stackable design greatly simplifies installation.
- Reduce maintenance costs via usage of direct drive premium NEMA motors and optimized motor base design.
- PennBarry's proprietary balance process improves on currently accepted AMCA specifications by considering the effects of the rotating mass on the entire fan structure, not just the wheel.
- Integral Sound Attenuation via acoustic panels enclosing both fan and motor.
- Compact sizes simplify logistics and installation with many configurations that will fit through a standard door opening.

EFFICIENT SILENT ARRAY™ FEATURES



RELIABILITY PERFORMANCE

Efficient direct drive configurations extend maintenance intervals while system redundancy ensures air performance across the full operating range.



SIMPLE, SCALABLE SOLUTION

With its extensible design, optimal system performance is attained by scaling the array; increasing or decreasing fan modules as your needs or system requirements change.



INDUSTRY BEST VIBRATION PERFORMANCE

Assembly balanced to G6.3. No resonant conditions throughout full operating range.



ROBOTICALLY WELDED ALUMINUM AIRFOIL WHEEL

Wheels available in 9-blade, 12-blade configurations and wheel widths of 80%, 100%, and 120%.



GALVANIZED STEEL FRAME AND BASE

Assembled with high strength fasteners.



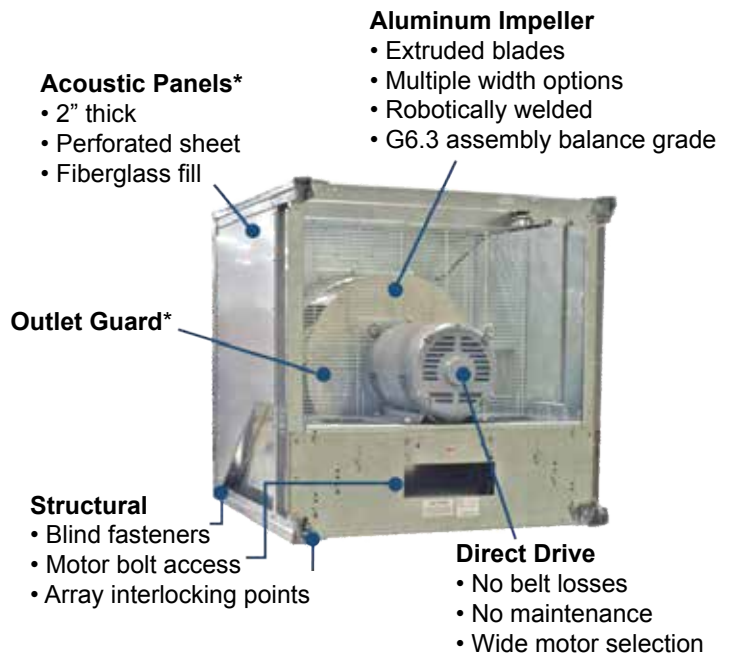
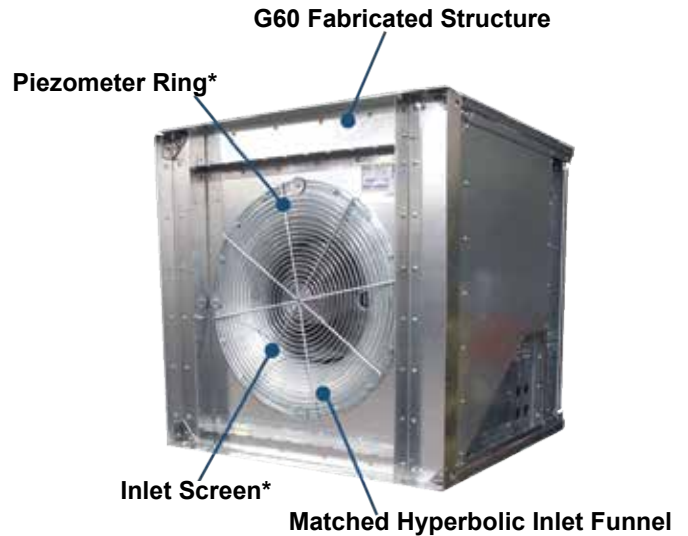
LOW MAINTENANCE

No belts, bearings, or sheaves, results in lower costs and improved system uptime.



EASY TO INSTALL

Modular design with integrated lifting points makes system integration and installation a breeze.



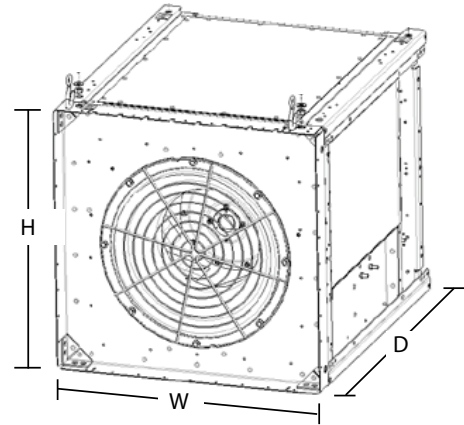
*Optional

EFFICIENT SILENT ARRAY™ SPECIFICATIONS

EFFICIENT SILENT ARRAY™ DIMENSIONAL DATA					
WHEEL SIZE	HOUSING DIMENSIONS			MAX STACKED CUBES **	MAX MOTOR FRAME SIZE
	WIDTH (W)	HEIGHT (H)	DEPTH (D)*		
10	20.03	18.79	24.56	4	184T
12	22.66	20.89	25.81	4	184T
13	24.53	22.4	28.06	4	213T
15	26.78	24.2	30.63	3	215T
16	29.03	25.75	35.31	3	254T
18	30.41	30.00	36.77	3	256T
20	33.75	34.00	37.85	3	284T
22	37.41	37.10	39.19	2	284T
25	41.43	41.00	40.57	2	284T

* Cabinet dimension only. Overall length including motor will vary based on motor type, size, and manufacturer.

**Recommended max stacked cubes based on max hp. Higher stacks are possibly with smaller hp-contact PennBarry engineering.



EFFICIENT SILENT ARRAY™ OPTIONS

PIEZOMETER RING

System for measuring pressure, consisting of pressure taps installed around the perimeter of the inlet cone.

- Measure airflow.
- Can be used as a “kill” switch for the fan.
- Factory install and field installation kit available.

SHAFT GROUNDING KIT

Highly recommended for all fans. Diverts stray voltage spikes to ground, extending motor bearing life increases operational longevity.

SPECIAL MOTORS

PennBarry can install most NEMA frame motors.

INLET DAMPER

Control the air flow to each fan, or as an array.

INLET SCREEN

A safety feature for the intake of the fan.

CLOTH WRAP

Recommended for clean room applications.

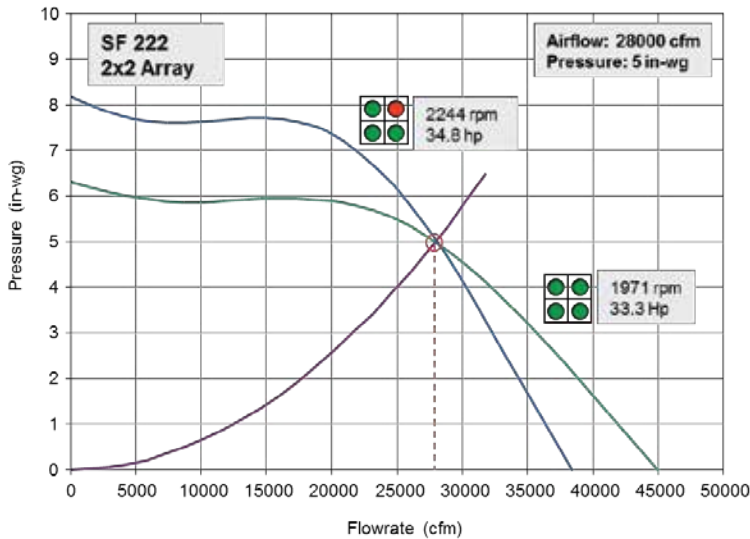
OUTLET GUARD

Safety feature for the outlet area, ensures no hand penetration into moving parts.

EFFICIENT SILENT ARRAY™

Maximum performance, reliability, and efficiency.

Example: 2X2 Efficient Silent Array™ with system redundancy.



If for any reason a single fan in the array is taken out of service, the remaining fans in the array can effectively compensate ensuring the system operating point is maintained.

REDUNDANCY / RELIABLE

Redundancy ensures system performance, even when a fan in the array is taken out of service.

REDUCED MAINTENANCE COSTS

Direct drive configuration eliminates bearings, belts, and pulleys, significantly reducing maintenance costs. Motor base has been optimized to reduce both material costs and weight.

SMALLER CABINET FOOTPRINT

Modular, scalable, stackable, design provides flexibility to meet a broad range of applications. Simplifies system retrofits as many modules are sized to fit through a standard door and elevator opening.





PennBarry Product Solutions

COMMERCIAL

Roof & Wall Exhaust Centrifugal Fans
Ceiling, Wall, & Inline Centrifugal Fans
Roof Supply Centrifugal Fans
Square & Round Centrifugal Fans
Wall Mounted Axial Fans
Hooded Roof Axial Fans
Upblast Roof Axial Fans
Gravity Ventilators
Roof Curbs

INDUSTRIAL

Utility Vent Sets
Freestanding Centrifugal Fans
Industrial & Material Handling Fans
Tubular Centrifugal Inline Fans
Mixed Flow Centrifugal Fans
Plug & Plenum Fans
Wall Mounted Propeller Fans
Tube Axial Fans
Vane Axial Fans
Bifurcator Fans
Fume Exhaust

ENERGY RECOVERY

Outdoor Units
Indoor Units

KITCHEN VENTILATION

Kitchen Hoods
Make-Up Air Units
Exhaust Fans



PENN BARRY™

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PennBarry is proud to be your preferred manufacturer of commercial and industrial fans and blowers. Learn how PennBarry can assist you in your next application by contacting your PennBarry Representative or visiting us on the web at www.pennbarry.com.

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