

MPA

Modular Plenum Array | Product Guide |



LOREN COOK COMPANY

INTRODUCTION



The MPA is a direct drive plenum fan that provides the flexibility to be used singularly or in parallel, so you can construct a multi-fan system to meet your exact performance criteria.



DESIGNED FOR

supply, exhaust or return air movement applications



ROBOTICALLY WELDED

aluminum airfoil wheels ensure the best quality and consistency



DESIGNED WITH

experienced design engineers using state of art engineering and laboratory facilities



REDUCED

fan size designed to be compact and configurable



PERFORMANCE RANGE

500-340,000 CFM



LOWER MAINTENANCE

lower cost, from no belts, bearings or sheaves



STATIC PRESSURES

up to 12" w.g.



CHOOSE FROM

9-blade or 12-blade aluminum airfoil wheel configurations



EXTRA BENEFITS

- ▶ The MPA is built with a galvanized steel frame, base and assembled with high strength fasteners.
- ▶ Reliable performance without resonant conditions throughout the operating range.
- ▶ The aluminum airfoil wheel is offered in 9-blade or 12-blade configurations with wheel widths of 80%, 100% and 120%.
- ▶ Arrays provide redundancy and even airflow to provide improved overall performance.

APPLICATION



Powerful, compact performance. Plenum arrays reduce required installation space and create a more uniform airflow.

The Cook Model MPA is a direct drive plenum fan configurable from stand-alone to parallel arrays of 2 to 20 fans. The MPA is compact and provides a great deal of flexibility in application. When used in an array, the MPA provides redundancy when you need it most. With 14 fan sizes ranging from 10" to 40.25" in diameter, and 9 or 12-blade wheels in three widths, the MPA has the flexibility to meet your needs.



SYSTEMS

- ▶ Retrofit
- ▶ High performance VAV systems
- ▶ Air Handlers
- ▶ Rooftops Units
- ▶ Telecom Data Centers
- ▶ Clean Rooms

COMMERCIAL FACILITIES

- ▶ Healthcare Facilities
- ▶ Educational Facilities
- ▶ Pharmaceutical
- ▶ Data Centers
- ▶ And many more Commercial Facilities

PLENUM ARRAY



Modular Plenum Arrays offer maximum performance, reliability and efficiency. The advantages of a proven design multiplied to achieve synergy and security.

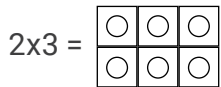
PARALLEL PERFORMANCE

Stackable units that allow flexibility to meet any design criteria. The plenum array design is compact and configurable. Plenum array redundancy ensures that the system continues performing, even with a fan in the array shut off.

STACKING CHART

STACKING CHART					SIZE RANGE
1x1	1x2	1x3	-	-	All
-	2x2	2x3	2x4	2x5	100 - 365
-	-	3x3	3x4	3x5	100 - 245
-	-	-	4x4	4x5	100 - 165

For Reference



BALANCING ACT



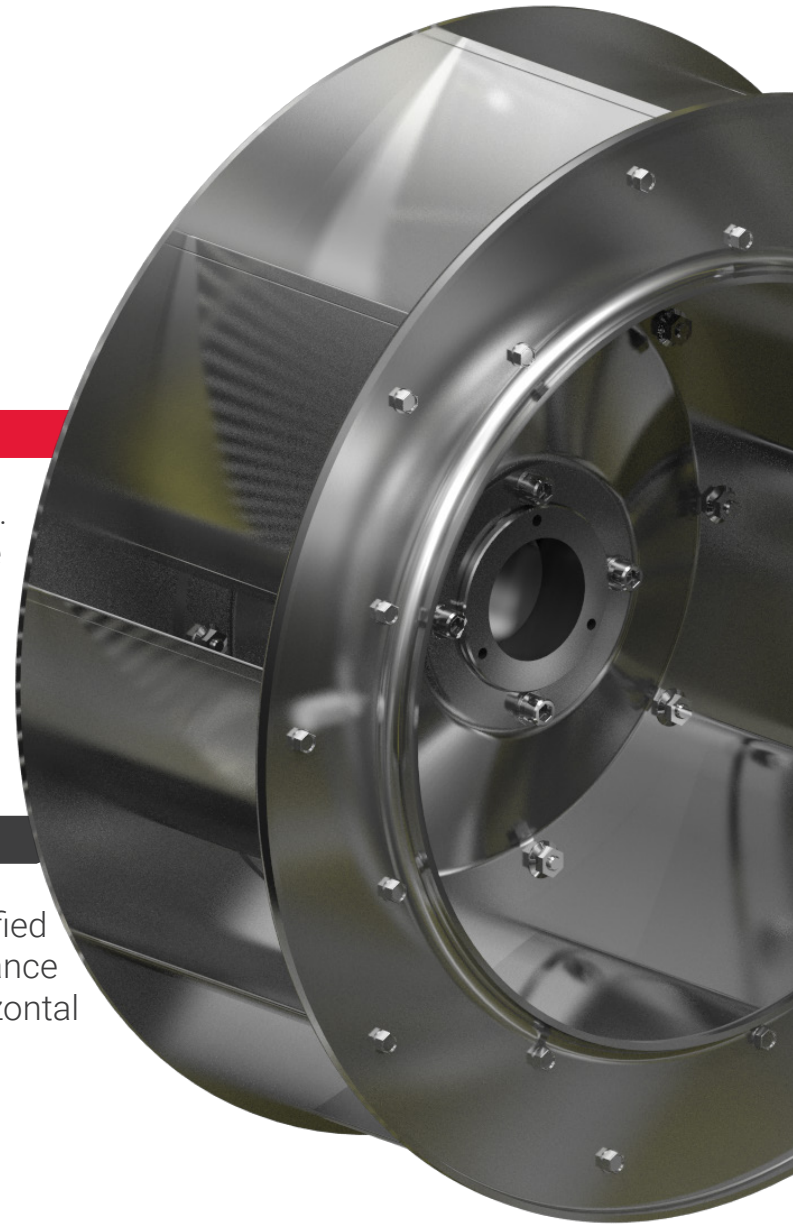
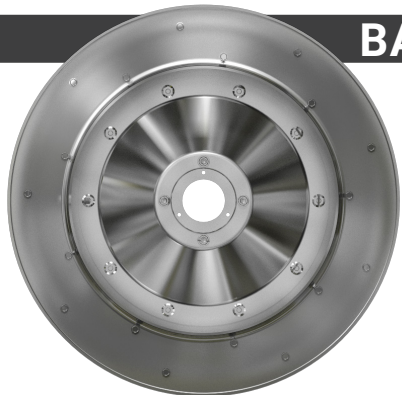
The MPA balance process improves on currently accepted AMCA specifications by considering the effects of the rotating mass on the unit as the whole, not just the wheel

STANDARD BALANCING

All fans prior to shipment are run tested at the specified operating speed. Each fan is dynamically balanced as a complete unit in accordance with ANSI/AMCA 204-96 "Balance Quality and Vibration Levels for Fans" to Fan Application Category BV-3, Balance Quality Grade G6.3. Balance readings are taken electronically in the vertical, and horizontal directions.

BALANCE UPGRADE

All fans prior to shipment can be run tested at the specified operating speed and balanced to category BV-4. Balance readings are taken electronically in the vertical, and horizontal directions.

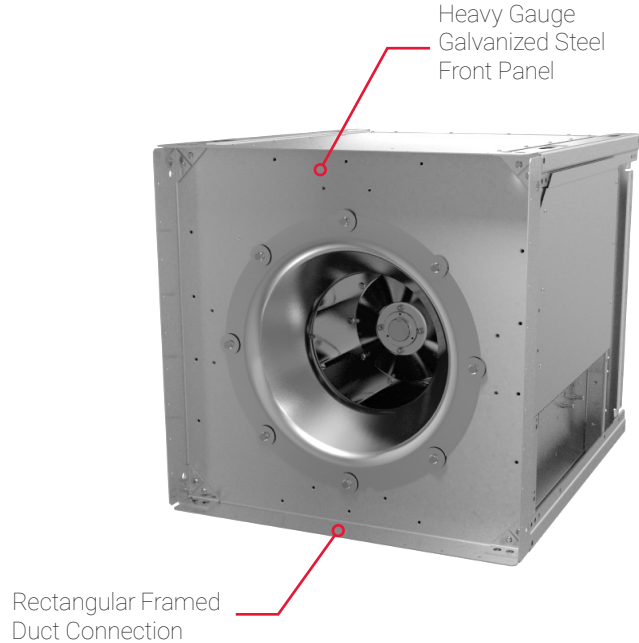


STANDARD FEATURES

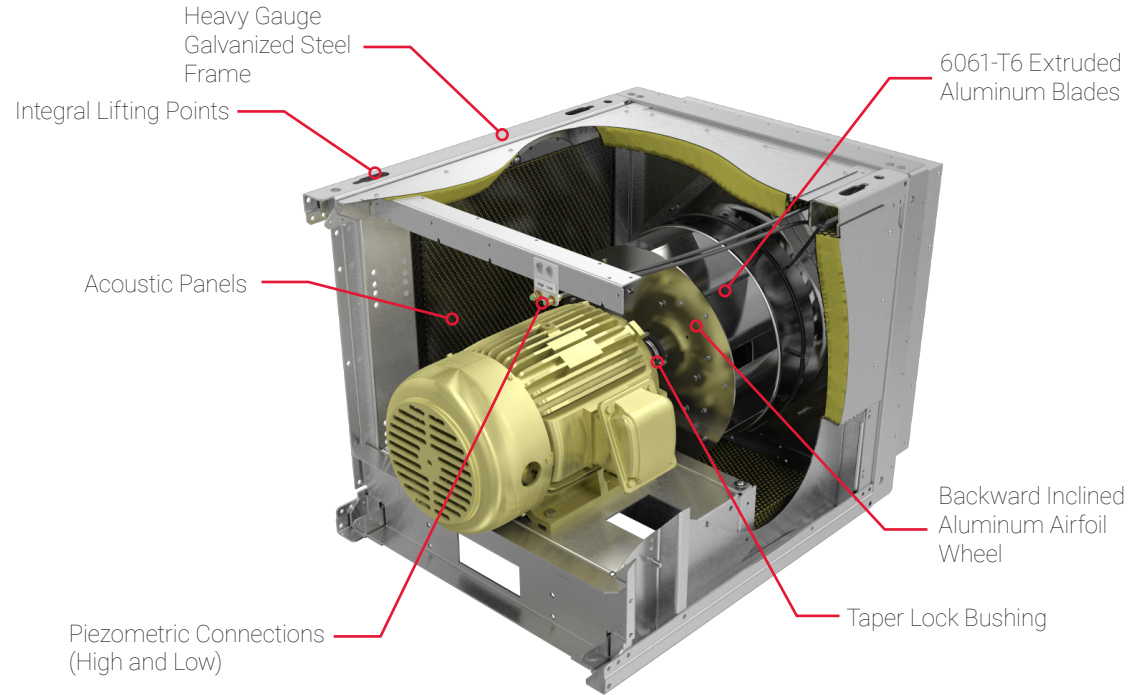


The plenum is built with a heavy gauge galvanized G90 steel frame and front panel for structural integrity of the base and to minimize vibration.

INLET VIEW



OUTLET VIEW



MPA ACCESSORIES



Beyond the MPA Standard Construction Features, Cook offers accessories to fit your custom air-movement requirements and/or preferences.

DETAILS

SPECIAL MOTORS

Can install most NEMA rated motors.

INLET DAMPER

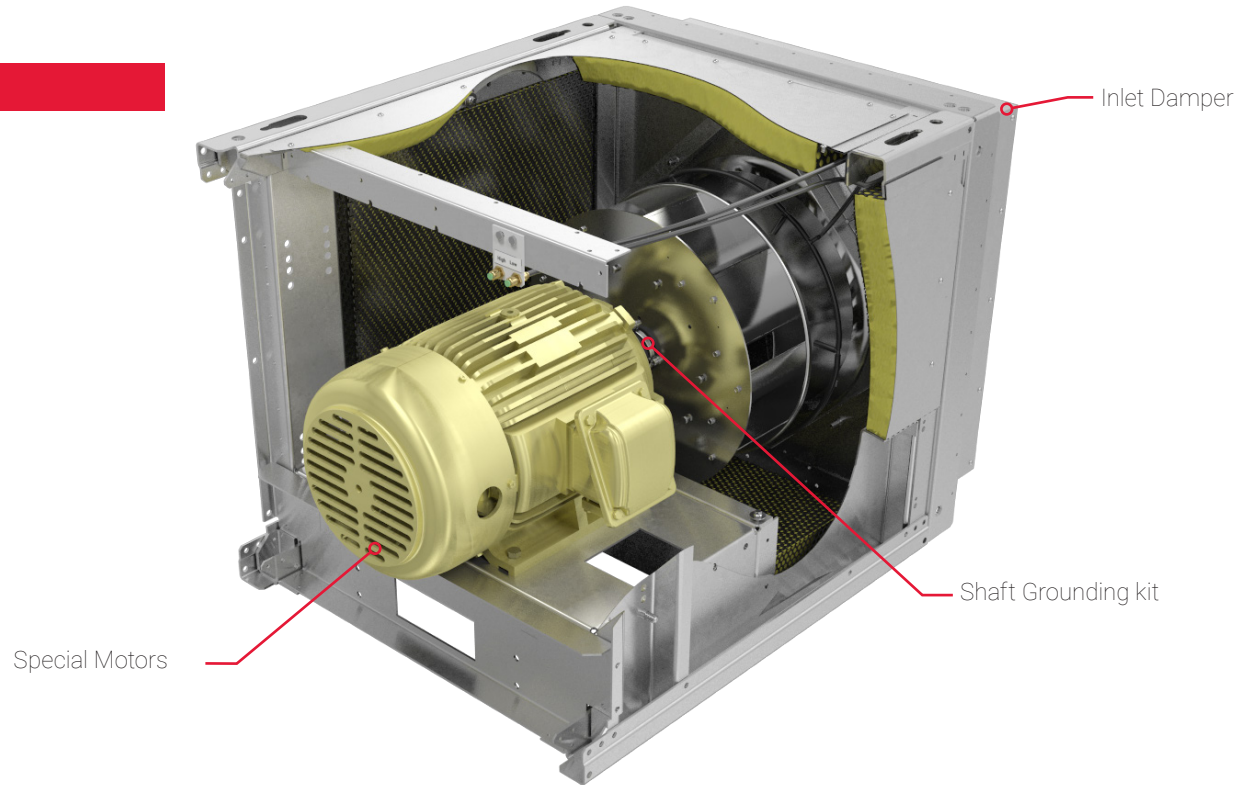
Controls backflow when fan is off.

INLET SCREEN

Inlet screen protect personnel and prevent debris from entering the fan. Inlet screens are constructed of wound spiral rings and are factory installed.

SHAFT GROUNDING KIT

Diverts stray voltage spikes to ground, extending motor bearing life

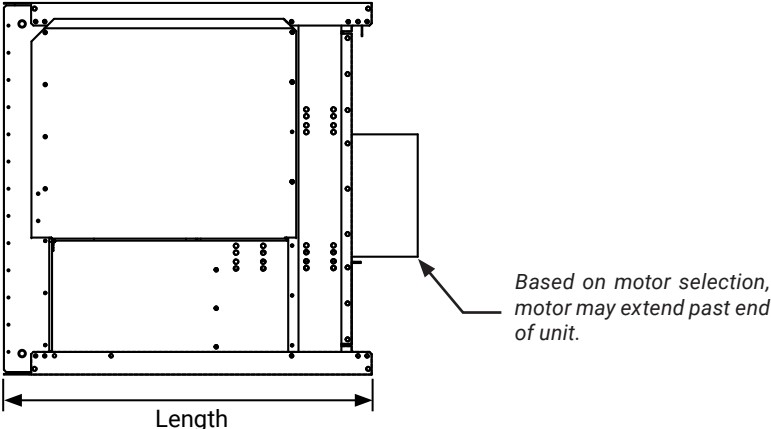
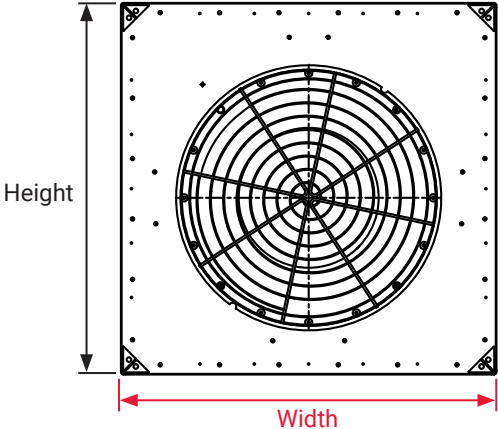


OVERALL DIMENSIONS



Overall dimensions are in inches. For more detailed dimensions, see the product submittal.

MPA SINGLE



Unit Size	100	120	135	150	165	180	195	225	245	270	300	330	365	402
Height	18 ¹³ / ₁₆	20 ⁷ / ₈	22 ³ / ₈	24 ³ / ₁₆	25 ³ / ₄	30	34	37 ¹ / ₈	41	44 ⁷ / ₈	49 ¹ / ₄	53 ³ / ₄	59 ³ / ₈	64 ³ / ₄
Width	20	22 ¹¹ / ₁₆	24 ¹ / ₂	26 ³ / ₄	29	30 ⁷ / ₁₆	33 ³ / ₄	37 ⁷ / ₁₆	41 ⁷ / ₁₆	44 ⁷ / ₈	49 ¹ / ₄	53 ³ / ₄	59 ³ / ₈	64 ³ / ₄
Length	24 ⁹ / ₁₆	25 ¹³ / ₁₆	28 ¹ / ₁₆	30 ⁵ / ₈	35 ¹ / ₈	36 ³ / ₄	37 ⁷ / ₈	39 ³ / ₁₆	40 ⁹ / ₁₆	39 ³ / ₄	44 ⁹ / ₁₆	46 ¹⁵ / ₁₆	50 ¹ / ₂	51 ⁷ / ₈

MPA CERTIFICATIONS



Cook uses third party verification agencies for certification, qualification, and listing of fan performance.

AMCA SOUND AND AIR

AMCA Certified Ratings Seal

Loren Cook products that bear the AMCA Certified Ratings Seal are licensed by AMCA International. These products meet the AMCA Standard and are within the product scope of AMCA International.

MPA
(Single Fan)



