

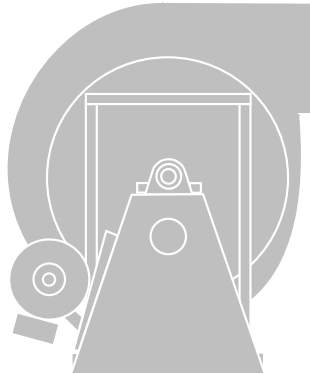
**IMH**



**COOK**

# IMH

## Industrial Material Handler



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## IMH Industrial Material Handler

Cook industrial material handler provides for continuous movement of material-laden air. It is well suited for installations involving exhaust, material conveying, pollution control, air circulation and a variety of other uses. Type IMH fans are available in standard arrangements 1, 4, 8, 9, and 10 and in special designs by consultation with the factory. Standard duty construction allows for operation up to 12,000 FPM tip speed. Heavy duty designs include tip speeds to 20,000 FPM. Type IMH is available with a full range of accessories allowing it to be adapted to many different applications.

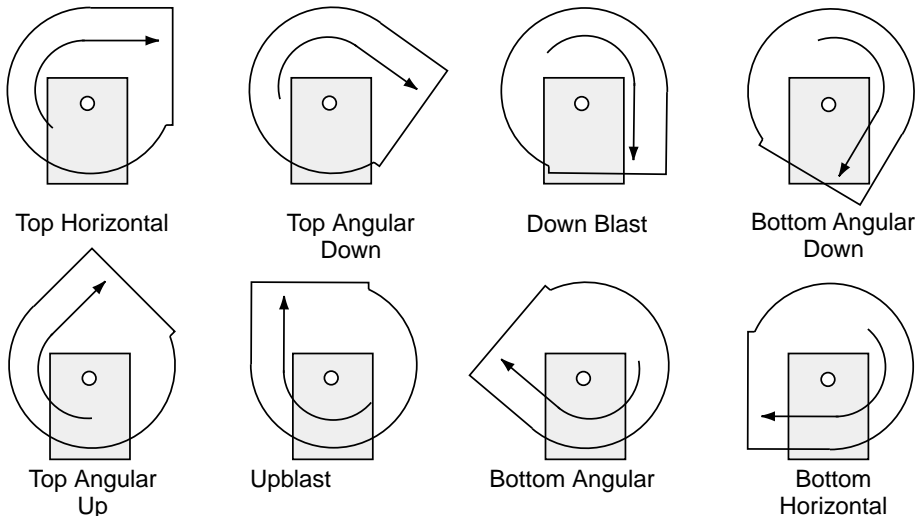


- All sizes and arrangements can be field rotated to any of the standard discharge positions. In addition, models MH and MHR can be reversed in the field to obtain clockwise or counter-clockwise rotation. Models MHA and MHB cannot be reversed.
- All units have continuously welded housings for leak-free operation.
- All sizes are provided with lifting lugs for ease of handling.
- The bearing pedestal is securely bolted to the scroll to allow field rotation and reversing if required.
- Standard bearings are grease lubricated and self-aligning ball or spherical roller type selected for a minimum of 200,000 hours average life.
- Standard shafting is minimum AISI-C-1045 turned, ground and polished steel sized for critical speed or at least 125 percent of cataloged maximum speed.
- All sizes are dynamically balanced as a complete unit prior to shipment to assure vibration-free operation. IMH fans are balanced to exceed AMCA 204-96 recommendations for industrial process.
- Accurate performance is assured through compliance with AMCA Certified Ratings Program. The MH and MHB are licensed to bear the AMCA Seal for Air Performance. The MHA is licensed to bear the AMCA Seal for Air and Sound Performance.

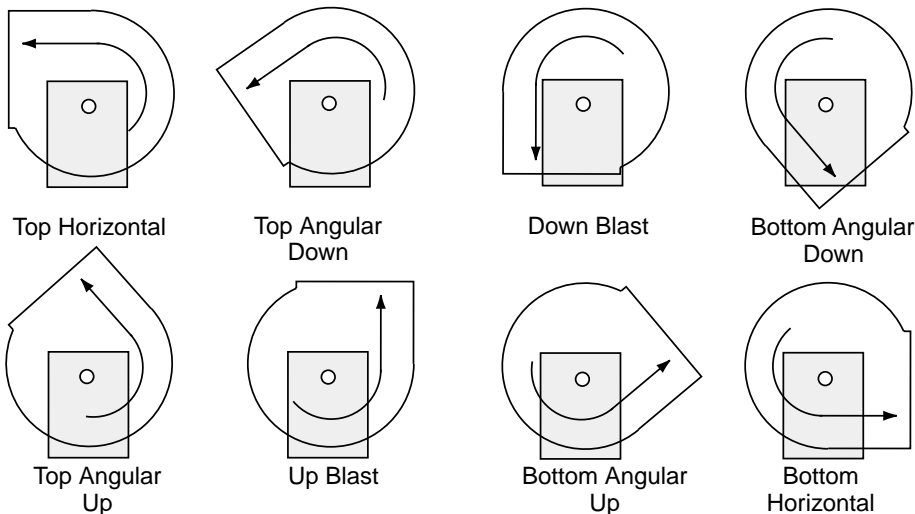
## Rotation and Discharge

The direction of rotation is determined from the drive side of the fan. On single inlet fans, drive side is always considered as the side opposite the fan inlet. The angle of the discharge is based on the horizontal axis of the fan and is designated in degrees above or below the standard reference axis.

### Clockwise Rotation



### Counter Clockwise Rotation



## Wheel Designs



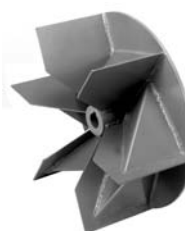
### MH - Open Type

The MH wheel is used for light material conveying applications when the airstreams contain small granular material, heavy or tacky dust, or small abrasive particulate matter. It is available in standard and heavy duty designs.



### MHR - Reinforced Open Type

The MHR wheel is used for heavier material conveying applications when larger/heavier particles are to be conveyed (similar to MH with heavier material and reinforcing rims for additional strength). Available in standard and heavy duty designs.



### MHB - Backplated Type

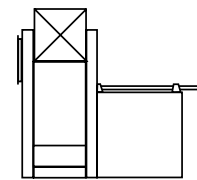
The MHB is used for conveying long, stringy, or fibrous materials. This impeller construction will not allow paper shreadings, threads, etc. to wrap around the hub and blades. Available in standard and heavy duty designs.



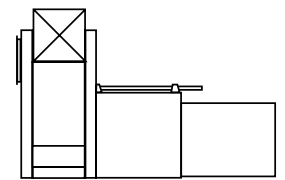
### MHA - Air Handling Type

The MHA wheel is used for clean air, fumes, high temperature or light dust applications. This design delivers higher efficiencies and lower operating costs than radial bladed wheels due to its flat backward inclined blades. Continuously welded, heavy gauge construction provides a long service life over a broad operating range.

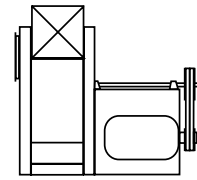
## Drive Arrangements



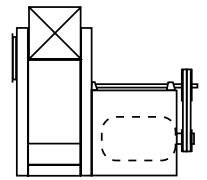
**Arrangement 1**  
For heavy duty material handling.



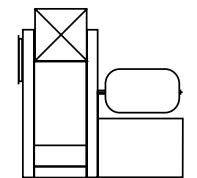
**Arrangement 8**  
For applications requiring direct drive.



**Arrangement 9**  
For mounting the motor to the fan bearing support pedestal.

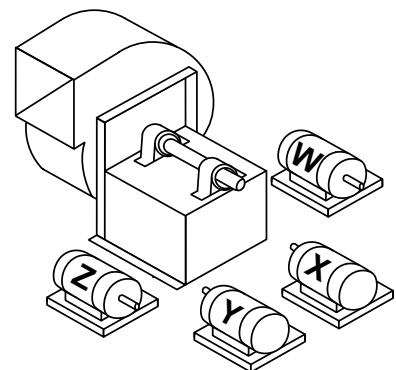


**Arrangement 10**  
For light duty applications where completely packaged unit suitable for outdoor use is desired.



**Arrangement 4**  
Wheel directly mounted on motor shaft; no fan bearings required. For low maintenance, dust sensitive applications..

## Motor Positions



Motor position is determined by facing the drive side of the fan and designating the motor position by letters W, X, Y, or Z.

## Classification for Spark Resistant Construction

Type	Construction
A	All parts of the fan in contact with the air or gas being handled shall be made of nonferrous material. Available in standard duty construction, with a maximum operating temperature of 300°F.
B	The fan shall have a nonferrous impeller and nonferrous ring about the opening through which the shaft passes. Available in standard duty construction, with a maximum operating temperature of 300°F.
C	The fan shall be so constructed that a shift of the impeller or shaft will not permit two ferrous parts of the fan to rub or strike. Available in all sizes and constructions with a maximum operating temperature of 400°F.

Notes:

- Bearings shall not be placed in the air or gas stream.
- The user shall electrically ground all fan parts.
- No method of construction can guarantee against the potential for sparks in fans. These classifications serve only as a guideline to establish general methods of construction.
- Nonferrous material is defined as having less than five percent iron or a material considered spark resistant.

## Application Information

### Air Density Correction Factor (C<sub>a</sub>)

Air Temp °F	Altitude in Feet Above Sea Level												
	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000	15000	20000
	Barometric Pressure in Inches of Mercury												
	29.92	28.86	27.82	26.82	25.84	24.90	23.98	23.09	22.22	21.39	20.58	16.89	13.75
70	1.000	0.965	0.930	0.896	0.864	0.832	0.801	0.772	0.743	0.715	0.688	0.564	0.460
100	0.946	0.913	0.880	0.848	0.817	0.788	0.758	0.730	0.703	0.677	0.651	0.534	0.435
150	0.869	0.838	0.808	0.779	0.750	0.723	0.696	0.670	0.645	0.621	0.598	0.490	0.399
200	0.803	0.774	0.747	0.720	0.693	0.668	0.644	0.620	0.596	0.574	0.552	0.453	0.369
250	0.746	0.720	0.694	0.669	0.645	0.621	0.598	0.576	0.554	0.534	0.513	0.421	0.343
300	0.697	0.673	0.648	0.625	0.602	0.580	0.559	0.538	0.518	0.498	0.480	0.394	0.320
350	0.654	0.631	0.608	0.586	0.565	0.544	0.524	0.505	0.486	0.468	0.450	0.369	0.301
400	0.616	0.594	0.573	0.552	0.532	0.513	0.494	0.475	0.458	0.440	0.424	0.348	0.283
450	0.582	0.562	0.541	0.522	0.503	0.485	0.467	0.449	0.432	0.416	0.400	0.329	0.268
500	0.552	0.532	0.513	0.495	0.477	0.459	0.442	0.426	0.410	0.395	0.380	0.312	0.254
550	0.525	0.506	0.488	0.470	0.453	0.437	0.420	0.405	0.390	0.375	0.361	0.296	0.241
600	0.500	0.482	0.465	0.448	0.432	0.416	0.401	0.386	0.371	0.357	0.344	0.282	0.230
650	0.477	0.460	0.444	0.428	0.412	0.397	0.383	0.368	0.354	0.341	0.328	0.269	0.219
700	0.457	0.441	0.425	0.409	0.394	0.380	0.366	0.352	0.339	0.327	0.314	0.258	0.210
750	0.438	0.422	0.407	0.392	0.378	0.364	0.351	0.338	0.325	0.313	0.301	0.247	0.201
800	0.420	0.406	0.391	0.377	0.363	0.350	0.337	0.324	0.312	0.301	0.289	0.237	0.193

### Notes On Material Conveying

1. For applications where material is conveyed through the fan, the actual air mixture density must be taken into account for SP and BHP calculations. The actual mixture density can be calculated as follows.

$$SP_{STD} = SP_{OPER} (0.075 / P_M)$$

2. In order to properly select from the catalog tables, the operating SP must be converted to SP at standard air conditions.

3. The resulting BHP from the selection tables must then be corrected to operating conditions.

$$HP_{OPER} = HP_{STD} (P_M / 0.075)$$

$$P_M = P_a (M_m + M_a / M_a)$$

P<sub>M</sub> = Mixture Density

P<sub>a</sub> = Air Density - 0.075 x C<sub>a</sub>

M<sub>m</sub> = Mass flow rate of material (lbm/min)

M<sub>a</sub> = Mass flow air (lbm / min) - CFM x P<sub>a</sub>

### Conveying Velocities

Material	FPM
Wood Sanding Dust	2000
Ground Cork	3000
Wood Sawdust, Flour	3500
Powdered Coal, Cotton, Ground Rubber	4000
Dry Vegetable Pulp or Wood Chips	4500
Wool, Paper	5000
Cement, Salt or Sand	7000

### High Temperature Applications

Temp. °F	Required Accessories
-30 - 180	Standard construction
181 - 300	High temperature paint
301 - 400	All Arrangements - High temperature paint, High temperature grease, Shaft cooler Arrangement 9 and 10 only - Motor heat shield
401 - 800	Arrangement 1, 8, and 9 only - High temperature paint, High temperature bearings, Shaft cooler Arrangement 9 only - Motor heat shield
801 - 1000	Consult factory

Notes:

- Aluminum construction is limited to 300°F
- Standard steel construction is not suitable for temperatures above 800°F
- For elevated airstream temperatures, the maximum RPM limits must be derated by the factors found in the RPM Derating Factor table to the right.

### RPM Derating Factor

Steel		Aluminum	
Temp. °F	RPM	Temp. °F	RPM
70	1.00	70	1.00
200	.98	200	0.93
300	.96	300	0.79
400	.94		
500	.91		
600	.87		
700	.81		
800	.75		

**Material Gauge, Shaft Diameter**

Unit Size	MH Wheel		MHR Wheel			MHB Wheel				MHA Wheel			Housing			Shaft Diameter (in Inches)			
	Blade	Gusset	Blade	Gusset	RIM	Blade SD*	Blade HD**	Gusset	Backplate	Backplate	Blade	Shroud	Scroll	Sides	Wrapper	SD*	HD**		
70	7	16	7	16	7	7	7	16	1/4	10	14	14	10	10	10	1-3/16	1-11/16		
90										7	12					1-7/16			
110										14	12					1-11/16			
130	1/4	14	1/4	14	1/4	1/4	1/4	14	5/16	1/4	10	7	7	7	7	1-11/16	2-3/16		
150																12	12	1-15/16	2-7/16
170																5/16	10	2-3/16	
190	1/4	12	5/16	12	1/4	1/4	5/16	12	3/8	5/16	1/4	1/4	1/4	1/4	1/4	2-7/16	2-15/16		
210																10	10	2-11/16	
230																3/8	10	2-15/16	
260	1/4	10	3/8	10	1/4	1/4	3/8	10	3/8	5/16	5/16	1/4	1/4	1/4	1/4	2-11/16	3-7/16		
290																2-15/16			

Unless otherwise noted wheel construction for standard duty and heavy duty is the same. \*Standard duty, \*\*Heavy duty

**Maximum RPM, Wheel Weight And WK<sup>2</sup>**

Unit Size	Wheel Diameter	Maximum RPM		MH		MHR		MHB SD		MHB HD		MHA SD		MHA HD	
		SD*	HD**	Lbs.	WK <sup>2</sup>	Lbs.	WK <sup>2</sup>	Lbs.	WK <sup>2</sup>	Lbs.	WK <sup>2</sup>	Lbs.	WK <sup>2</sup>	Lbs.	WK <sup>2</sup>
70	12-1/4	3742	6236	13	0.80	19	1.86	21	1.91	21	1.91	12.7	1.31	12.3	1.31
90	15-5/8	2934	4889	22	2.07	32	4.84	34	4.97	34	4.97	24.6	4.51	23.5	4.49
110	19-1/8	2397	3994	39	6.33	62	14.81	54	15.20	59	16.55	36.1	10.7	33.9	10.6
130	22-5/8	2026	3377	52	13.12	83	30.70	75	31.50	83	34.30	58.0	25.6	55.3	25.5
150	26-1/8	1755	2924	65	23.86	102	55.84	115	57.30	115	62.39	94.4	48.4	90.1	50.5
170	29-5/8	1547	2579	85	41.06	132	96.10	159	98.61	159	107.4	129.6	93.2	124.3	95.3
190	33	1389	2315	105	62.80	200	147.0	201	150.8	221	164.2	155.4	145.6	147.8	145.3
210	36-1/2	1256	2093	128	101.2	245	262.4	254	243.1	276	264.7	241.4	290.0	230.0	289.8
230	40	1146	1910	160	156.7	336	406.2	326	376.4	359	405.2	323.5	416.5	307.7	427.3
260	45-1/8	1016	1693	210	255.6	400	662.5	421	613.9	450	660.9	474.8	829.5	452.4	840.3
290	50-1/2	908	1513	260	372.7	490	1006	525	969.4	548	1044	576.5	1296	553.4	1307

Unless otherwise noted wheel construction for standard duty and heavy duty is the same. \*Standard duty, \*\*Heavy duty

**Motor Selection**

For proper motor selection, consideration must be given to starting torque requirements along with the operating BHP. The table *Maximum RPM, Wheel Weight and WK<sup>2</sup>* (above) lists the WK<sup>2</sup> factor for different wheel sizes and types. In some cases it may be necessary to provide a larger horsepower motor, even though it may not be indicated by operating BHP, in order to bring the fan to speed. The following formula can be applied to determine the required motor starting torque.

$$WK_m^2 = WK_f^2 (FRPM/MRPM)^2 \quad (1.1)$$

WK<sub>m</sub><sup>2</sup> - The moment of inertia required at the motor shaft, LB-Ft<sup>2</sup>

WK<sub>f</sub><sup>2</sup> - The moment of inertia of the fan, LB-Ft<sup>2</sup>

FRPM - Fan RPM

MRPM - Motor RPM

Motor starting torque can vary greatly among motor manufacturers. The available WK<sub>m</sub><sup>2</sup> of the motor should be obtained from the motor manufacturer.

**Ordering Information**

Model numbers for IMH units should be specified as follows.

70MH-HD

70 - Indicates unit size

MH - Indicates model (MH, MHB, MHR, or MHA)

HD - Indicates either standard duty (SD) or heavy duty (HD)

In addition the following information must be supplied to in order to fully specify the fan order.

Rotation - CW or CCW

Discharge - THD, TAD, DBD, TAD, BHD, BAU, UBD, or TAU

Arrangement - Arrangement 1, Arrangement 3, or Arrangement 9 or 10

Motor Position - W, X, Y or Z. Only required for Arrangement 1

## Industrial Material Handler Radial Blade Belt Driven Single Width, Single Inlet



Loren Cook Company certifies that the MH shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.



Type MH is furnished standard Classified by UL (as to electrical shock and mechanical hazards only) when furnished with factory supplied motor.



Type MH is furnished standard with CSA Certification (Standard 113-M1984) when furnished with factory supplied motor.

**Description:** Fan shall be a single width, single inlet radial blade, belt driven industrial material handler.

**Certifications:** Fan shall be manufactured at an ISO 9001 certified facility. Fan shall be Underwriters Laboratories Classified (as to electrical shock and mechanical hazards only) and CSA Certified (Standard 113-M1984). Fan shall bear the AMCA certified ratings seal for air performance.

**Construction:** The fan shall be of bolted and welded construction utilizing corrosion resistant fasteners. The scroll wrapper and scroll side panels shall be a minimum 10 gauge steel. The entire fan housing shall have continuously welded seams for leakproof operation and shall be field rotatable to any one of eight discharge positions. Housing side panels shall be rigidly reinforced using structural steel to prevent flexing and vibration at high pressures. Bearing support shall be minimum 1/4" welded steel. Lifting lugs shall be provided for ease of installation. Unit shall bear an engraved aluminum nameplate and shall be shipped in ISTA certified transit tested packaging.

**Coating:** All steel fan components shall be Lorenized™ with an electrostatically applied, baked polyester powder coating. Each component shall be subject to a five stage environmentally friendly wash system, followed by a minimum 2 mil thick baked powder finish. Paint must exceed 1,000 hour salt spray under ASTM B117 test method.

**Wheel:** Wheel shall be steel radial blade open type. Blades shall be minimum 7 gauge steel continuously welded to the hub and aerodynamic gusset. Hub shall be keyed and securely attached to the fan shaft utilizing four setscrews. Wheel shall be balanced in accordance with AMCA Standard 204-96, *Balance Quality and Vibration Levels for Fans*.

**Motor:** Motor shall be heavy duty type with permanently lubricated sealed ball bearings and furnished at the specified voltage, phase and enclosure.

**Blower Shaft:** Blower shaft shall be AISI C-1045 hot rolled and accurately turned, ground and polished. Shafting shall be sized for a critical speed of at least 125 percent of maximum RPM.

**Bearings:** Bearings shall be designed and tested specifically for use in air handling applications. Construction shall be heavy duty regreasable ball or roller type in a cast iron pillow block housing and selected for a minimum L50 life in excess of 200,000 hours at maximum cataloged operating speed.

**Belts and Drives:** Belts shall be oil and heat resistant, non-static type. Drives shall be precision machined cast iron type, keyed and securely attached to the wheel and motor shafts. Drives shall be sized for 150 percent of the installed motor horsepower. The variable pitch motor drive must be factory set to the specified fan RPM.

**Product:** Fan shall be model MH as manufactured by Loren Cook Company of Springfield, Missouri.

**Dimension Data, Beginning Page 10**

**Industrial Material Handler  
Reinforced Radial Blade  
Belt Driven  
Single Width, Single Inlet**



Type MHR is furnished standard Classified by UL (as to electrical shock and mechanical hazards only) when furnished with factory supplied motor.

Type MHR is furnished standard with CSA Certification (Standard 113-M1984) when furnished with factory supplied motor.

**Description:** Fan shall be a single width, single inlet reinforced radial blade, belt driven industrial material handler.

**Certifications:** Fan shall be manufactured at an ISO 9001 certified facility. Fan shall be Underwriters Laboratories Classified (as to electrical shock and mechanical hazards only) and CSA Certified (Standard 113-M1984).

**Construction:** The fan shall be of bolted and welded construction utilizing corrosion resistant fasteners. The scroll wrapper and scroll side panels shall be a minimum 10 gauge steel. The entire fan housing shall have continuously welded seams for leakproof operation and shall be field rotatable to any one of eight discharge positions. Housing side panels shall be rigidly reinforced using structural steel to prevent flexing and vibration at high pressures. Bearing support shall be minimum 1/4" welded steel. Lifting lugs shall be provided for ease of installation. Unit shall bear an engraved aluminum nameplate and shall be shipped in ISTA certified transit tested packaging.

**Coating:** All steel fan components shall be Lorenized™ with an electrostatically applied, baked polyester powder coating. Each component shall be subject to a five stage environmentally friendly wash system, followed by a minimum 2 mil thick baked powder finish. Paint must exceed 1,000 hour salt spray under ASTM B117 test method.

**Wheel:** Wheel shall be steel, reinforced rim radial blade type. Blades shall be minimum 7 gauge steel continuously welded to the hub, aerodynamic gusset and minimum 10 gauge reinforcing rims. Hubs shall be keyed and securely attached to the fan shaft utilizing four setscrews. Wheel shall be balanced in accordance with AMCA Standard 204-96, *Balance Quality and Vibration Levels for Fans*.

**Motor:** Motor shall be heavy duty type with permanently lubricated sealed ball bearings and furnished at the specified voltage, phase and enclosure.

**Blower Shaft:** Blower shaft shall be AISI C-1045 hot rolled and accurately turned, ground and polished. Shafting shall be sized for a critical speed of at least 125 percent of maximum RPM.

**Bearings:** Bearings shall be designed and tested specifically for use in air handling applications. Construction shall be heavy duty regreasable ball or roller type in a cast iron pillow block housing and selected for a minimum L50 life in excess of 200,000 hours at maximum cataloged operating speed.

**Belts and Drives:** Belts shall be oil and heat resistant, non-static type. Drives shall be precision machined cast iron type, keyed and securely attached to the wheel and motor shafts. Drives shall be sized for 150 percent of the installed motor horsepower. The variable pitch motor drive must be factory set to the specified fan RPM.

**Product:** Fan shall be model MHR as manufactured by Loren Cook Company of Springfield, Missouri.

**Dimension Data, Beginning Page 10**



# MHB Specifications

## Industrial Material Handler Backplated Radial Blade Belt Driven Single Width, Single Inlet



Loren Cook Company certifies that the MHB shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.



Type MHB is furnished standard Classified by UL (as to electrical shock and mechanical hazards only) when furnished with factory supplied motor.



Type MHB is furnished standard with CSA Certification (Standard 113-M1984) when furnished with factory supplied motor.

**Description:** Fan shall be a single width, single inlet backplated radial blade, belt driven industrial material handler.

**Certifications:** Fan shall be manufactured at an ISO 9001 certified facility. Fan shall be Underwriters Laboratories Classified (as to electrical shock and mechanical hazards only) and CSA Certified (Standard 113-M1984). Fan shall bear the AMCA certified ratings seal for air performance.

**Construction:** The fan shall be of bolted and welded construction utilizing corrosion resistant fasteners. The scroll wrapper and scroll side panels shall be a minimum 10 gauge steel. The entire fan housing shall have continuously welded seams for leakproof operation and shall be field rotatable to any one of eight discharge positions. Housing side panels shall be rigidly reinforced using structural steel to prevent flexing and vibration at high pressures. Bearing support shall be minimum 1/4" welded steel. Lifting lugs shall be provided for ease of installation. Unit shall bear an engraved aluminum nameplate and shall be shipped in ISTA certified transit tested packaging.

**Coating:** All steel fan components shall be Lorenized™ with an electrostatically applied, baked polyester powder coating. Each component shall be subject to a five stage environmentally friendly wash system, followed by a minimum 2 mil thick baked powder finish. Paint must exceed 1,000 hour salt spray under ASTM B117 test method.

**Wheel:** Wheel shall be steel, backplated radial blade type. Blades shall be minimum 7 gauge steel continuously welded to the hub, aerodynamic gusset and minimum 1/4" backplate. Hubs shall be keyed and securely attached to the fan shaft utilizing four setscrews. Wheel shall be balanced in accordance with AMCA Standard 204-96, *Balance Quality and Vibration Levels for Fans*.

**Motor:** Motor shall be heavy duty type with permanently lubricated sealed ball bearings and furnished at the specified voltage, phase and enclosure.

**Blower Shaft:** Blower shaft shall be AISI C-1045 hot rolled and accurately turned, ground and polished. Shafting shall be sized for a critical speed of at least 125 percent of maximum RPM.

**Bearings:** Bearings shall be designed and tested specifically for use in air handling applications. Construction shall be heavy duty regreasable ball or roller type in a cast iron pillow block housing and selected for a minimum L50 life in excess of 200,000 hours at maximum cataloged operating speed.

**Belts and Drives:** Belts shall be oil and heat resistant, non-static type. Drives shall be precision machined cast iron type, keyed and securely attached to the wheel and motor shafts. Drives shall be sized for 150 percent of the installed motor horsepower. The variable pitch motor drive must be factory set to the specified fan RPM.

**Product:** Fan shall be type MHB as manufactured by Loren Cook Company of Springfield, Missouri.

**Dimension Data, Beginning Page 10**

**Industrial Material Handler  
Backward Inclined Flat Blade  
Belt Driven  
Single Width, Single Inlet**



Loren Cook Company certifies that the MHA shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.



Type MHA is furnished standard Classified by UL (as to electrical shock and mechanical hazards only) when furnished with factory supplied motor.



Type MHA is furnished standard with CSA Certification (Standard 113-M1984) when furnished with factory supplied motor.

**Description:** Fan shall be a single width, single inlet radial blade, belt driven industrial material handler.

**Certifications:** Fan shall be manufactured at an ISO 9001 certified facility. Fan shall be Underwriters Laboratories Classified (as to electrical shock and mechanical hazards only) and CSA Certified (Standard 113-M1984). Fan shall bear the AMCA certified ratings seal for air and sound performance.

**Construction:** The fan shall be of bolted and welded construction utilizing corrosion resistant fasteners. The scroll wrapper and scroll side panels shall be a minimum 10 gauge steel. The entire fan housing shall have continuously welded seams for leakproof operation and shall be field rotatable to any one of eight discharge positions. Housing side panels shall be rigidly reinforced using structural steel to prevent flexing and vibration at high pressures. Bearing support shall be minimum 1/4" welded steel. Lifting lugs shall be provided for ease of installation. Unit shall bear an engraved aluminum nameplate and shall be shipped in ISTA certified transit tested packaging.

**Coating:** All steel fan components shall be Lorenized™ with an electrostatically applied, baked polyester powder coating. Each component shall be subject to a five stage environmentally friendly wash system, followed by a minimum 2 mil thick baked powder finish. Paint must exceed 1,000 hour salt spray under ASTM B117 test method.

**Wheel:** Wheel shall be steel centrifugal backward inclined, flat blade type. Blades shall be continuously welded to the backplate and inlet shroud. Wheel hub shall be keyed and securely attached to the fan shaft. Wheel shall be balanced in accordance with AMCA Standard 204-96, *Balance Quality and Vibration Levels for Fans*.

**Motor:** Motor shall be heavy duty type with permanently lubricated sealed ball bearings and furnished at the specified voltage, phase and enclosure.

**Blower Shaft:** Blower shaft shall be AISI C-1045 hot rolled and accurately turned, ground and polished. Shafting shall be sized for a critical speed of at least 125 percent of maximum RPM.

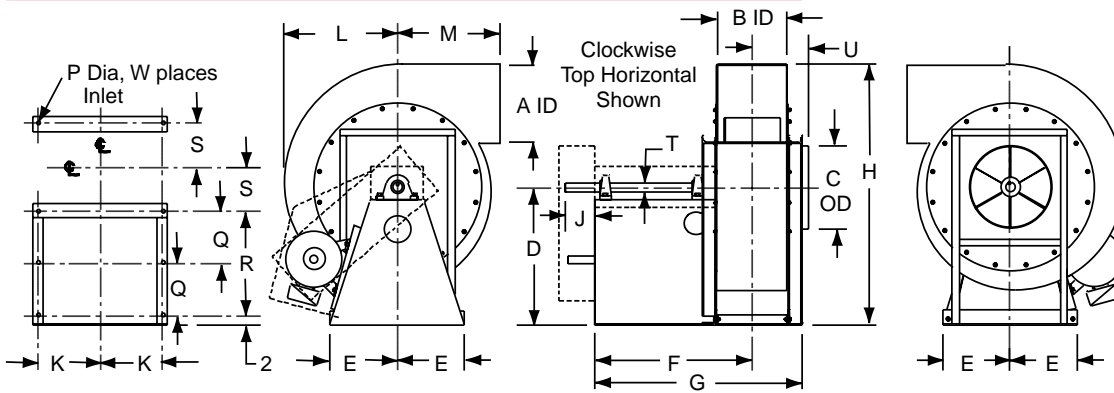
**Bearings:** Bearings shall be designed and tested specifically for use in air handling applications. Construction shall be heavy duty regreasable ball or roller type in a cast iron pillow block housing and selected for a minimum L50 life in excess of 200,000 hours at maximum cataloged operating speed.

**Belts and Drives:** Belts shall be oil and heat resistant, non-static type. Drives shall be precision machined cast iron type, keyed and securely attached to the wheel and motor shafts. Drives shall be sized for 150 percent of the installed motor horsepower. The variable pitch motor drive must be factory set to the specified fan RPM.

**Product:** Fan shall be model MHA as manufactured by Loren Cook Company of Springfield, Missouri.

**Dimension Data, Beginning Page 10**

# Arrangements 1 and 9 Dimension Data



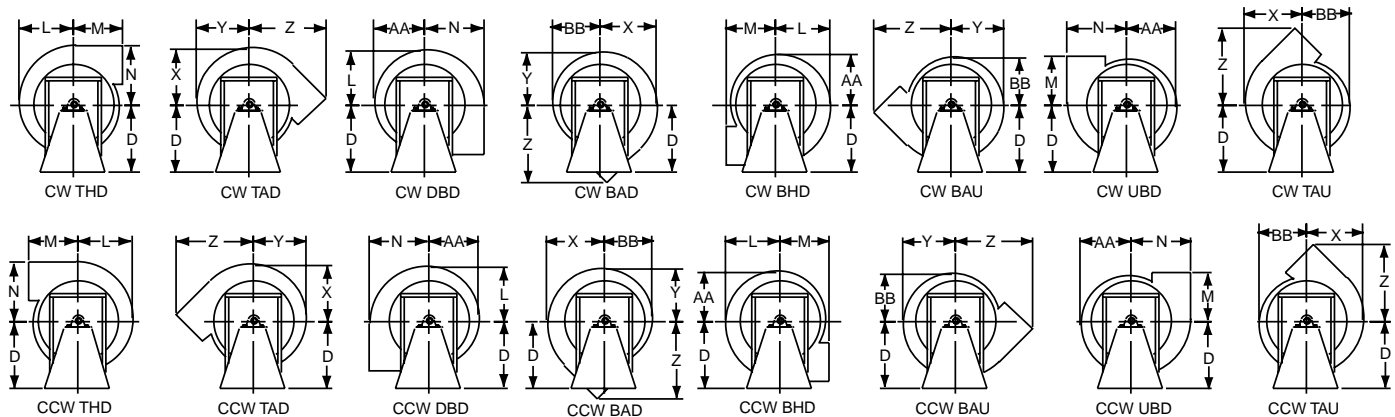
Arrangement 9 shown

## Arrangement 1 and 9 Dimension Data

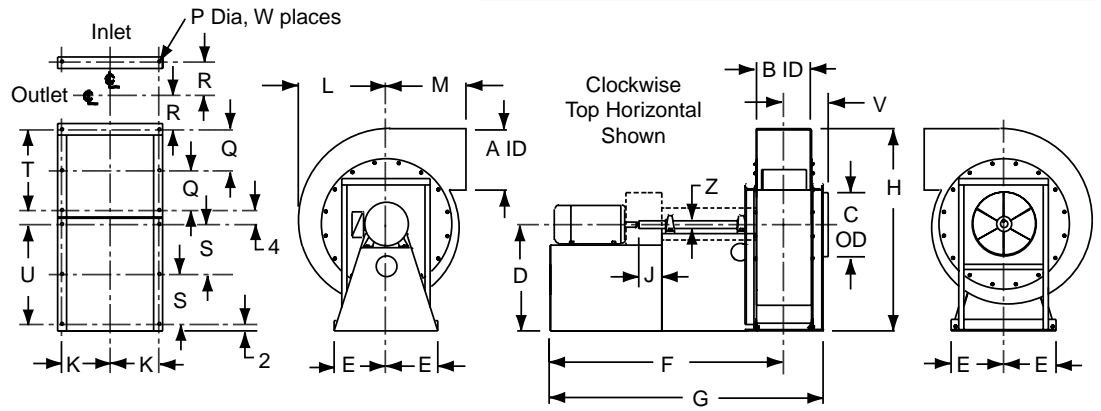
Size	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q
70	6-5/8	5-7/8	7	14-1/4	9-11/16	21-1/16	26-1/4	24-13/16	4	9-3/16	9-11/16	8-5/16	10-9/16	9/16	-
90	8-7/16	7-1/2	9	15-1/4	9-11/16	21-7/8	27-7/8	28-3/4	4	9-3/16	12-5/16	10-5/8	13-1/2	9/16	-
110	10-3/8	9-1/8	11	18-3/4	9-11/16	25	32-7/8	35-3/16	4	9-3/16	15-1/16	13	16-7/16	9/16	8-1/4
130	12-3/16	10-7/8	13	21-3/4	11-3/4	26-3/16	34-7/8	41-3/16	5	11	17-13/16	15-3/8	19-7/16	11/16	8-3/8
150	14-1/16	12-9/16	15	25-1/4	13	31-3/4	41-5/16	47-5/8	5	12-1/4	20-5/8	17-3/4	22-3/8	11/16	10-3/4
170	16	14-1/4	17	28-1/4	13-7/8	32-9/16	43	53-5/8	6	13-1/8	23-3/4	20-1/8	25-3/8	11/16	10-3/4
190	17-13/16	15-7/8	19	31-1/4	15-5/16	34-11/16	46	59-1/2	6	14-9/16	25-15/16	22-7/16	28-1/4	11/16	11-3/8
210	19-3/4	17-9/16	21	34-1/2	16-9/16	38-1/4	50-3/8	65-3/4	6	15-13/16	28-1/2	23	31-1/4	11/16	12-3/4
230	21-5/8	19-1/4	23	37-1/2	18-13/16	41-1/8	55-1/4	71-13/16	7	17-9/16	31-1/4	26	34-5/16	13/16	13-7/16
260	24-7/16	21-3/4	26	41-3/4	20-5/8	43-15/16	58-11/16	82-15/16	7	19-3/8	35-1/8	29	41-3/16	13/16	13-7/8
290	27-5/16	24-1/4	29	46-1/2	22-1/2	45-9/16	62-3/16	92-1/2	8	21-1/4	39-1/2	31-3/4	45-7/8	13/16	14-3/8

Size	R	S	T		U	W	X	Y	Z	AA	BB	Max. Motor Frame*	Approx. Ship Wt. Lbs. less mtr.**	
			Standard Duty	Heavy Duty									Standard Duty	Heavy Duty
70	14-7/8	4-1/4	1-3/16	1-7/16	6-3/16	6	10-1/8	9-1/4	13-3/8	8-13/16	8-3/8	184T	239	275
90	14-7/8	5-1/16	1-7/16	1-11/16	7	6	12-15/18	11-3/4	17-1/16	11-3/16	10-5/8	184T	318	366
110	16-1/2	6-1/2	1-7/16	1-15/16	8-13/16	8	15-3/4	14-7/16	20-13/16	13-3/4	13-1/16	215T	424	488
130	16-3/4	7-3/8	1-11/16	2-3/16	9-13/16	8	18-5/8	17	24-5/8	16-3/16	15-3/8	215T	558	642
150	21-1/2	8-7/32	1-15/16	2-7/16	10-11/16	8	21-1/2	19-3/4	28-3/8	18-7/8	18	256T	720	828
170	21-1/2	9-1/16	2-3/16	2-7/16	11-1/12	8	24-9/16	22-1/2	32-3/16	21-1/4	20-1/4	256T	910	1046
190	22-3/4	9-15/16	2-7/16	2-15/16	12-5/16	8	27-1/8	24-7/8	35-13/16	23-3/4	22-5/8	256T	1127	1296
210	25-1/2	10-21/23	2-7/16	2-15/16	13-3/16	8	29-7/8	27-1/8	38-3/8	25-3/4	24-3/8	326T	1372	1578
230	26-7/8	12-5/16	2-11/16	3-7/16	15-1/8	8	32-13/16	29-13/16	42-5/8	28-5/16	26-13/16	326T	1645	1892
260	27-3/4	13-9/16	2-11/16	3-7/16	16-3/8	8	38-3/16	33-1/2	49-5/8	31-7/8	30-1/4	326T	2107	2423
290	28-3/4	14-13/16	2-15/16	3-7/16	17-5/8	8	42-11/16	37-5/8	54-7/8	35-3/4	33-7/8	326T	2630	3025

All dimensions in inches. \*Applies to Arrangement 9 only based on single speed ODP motor. \*\*Shipping weights for Arrangement 1 MH model given.



# Dimension Data **Arrangement 8**

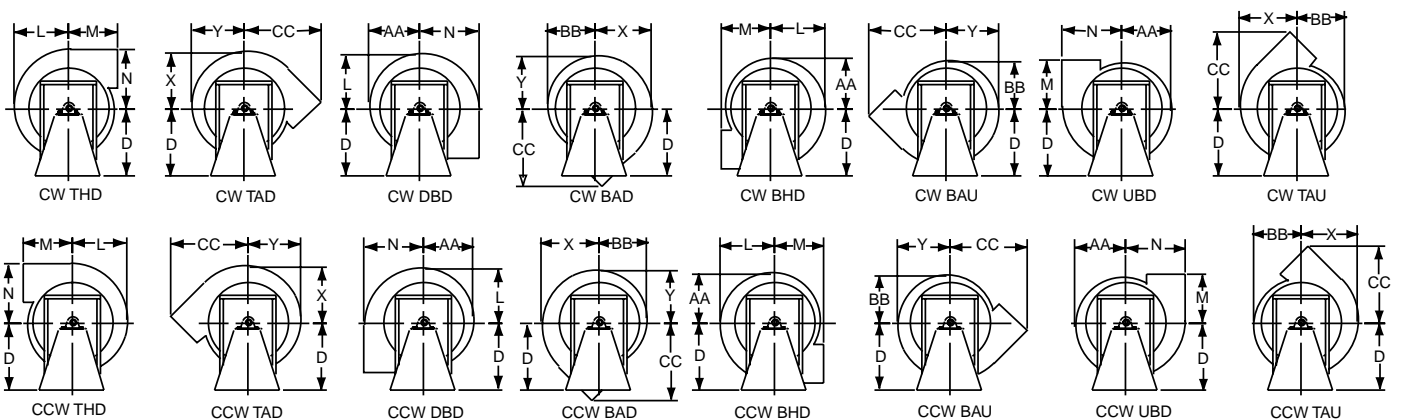


**Arrangement 8** Dimension Data

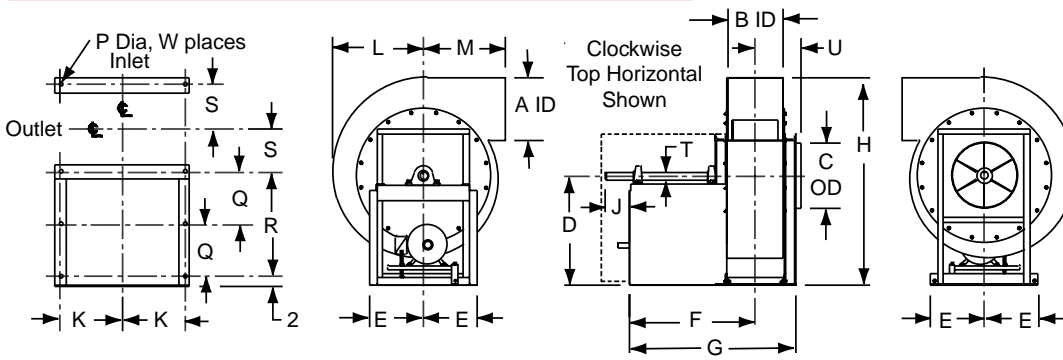
Size	A	B	C	D	E	F*	G*	H	J	K	L	M	N	P	Q	R
70	6-5/8	5-7/8	7	14-1/4	9-11/16	49-15/16	55-1/8	24-13/16	4	9-3/16	9-11/16	8-5/16	10-9/16	9/16	-	4-1/4
90	8-7/16	7-1/2	9	15-1/4	9-11/16	53-9/16	59-9/16	28-3/4	4	9-3/16	12-5/16	10-5/8	13-1/2	9/16	-	5-1/16
110	10-3/8	9-1/8	11	18-3/4	9-11/16	57-3/4	65-5/8	35-3/16	4	9-3/16	15-1/16	13	16-7/16	9/16	8-1/4	6-1/2
130	12-3/16	10-7/8	13	21-3/4	11-3/4	61-7/16	70-1/8	41-3/16	5	11	17-13/16	15-3/8	19-7/16	11/16	8-3/8	7-3/8
150	14-1/16	12-9/16	15	25-1/4	13	69-1/4	78-13/16	47-5/8	5	12-1/2	20-5/8	17-3/4	22-3/8	11/16	10-3/4	8-7/32
170	16	14-1/4	17	28-1/4	13-7/8	74-3/16	84-5/8	53-5/8	6	13-1/8	23-3/4	20-1/8	25-3/8	11/16	10-3/4	9-1/16
190	17-13/16	15-7/8	19	31-1/4	15-5/16	77-13/16	89-1/8	59-1/2	6	14-9/16	25-15/16	22-7/16	28-1/4	11/16	11/38	9-15/16
210	19-3/4	17-9/16	21	34-1/2	16-9/16	85-1/2	97-5/8	65-3/4	6	15-13/16	28-1/2	23	31-1/4	11/16	12-3/4	10-21/32
230	21-5/8	19-1/4	23	37-1/2	18-13/16	89-3/8	103-1/2	71-13/16	7	17-9-16	31-1/4	26	34-5/16	13/16	13-7/16	12-5/16
260	24-7/16	21-3/4	26	41-3/4	20-5/8	94-3/16	108-15/16	82-15/16	7	19-3/8	35-1/8	29	41-3/16	13/16	13-7/8	13-9/16
290	27-5/16	24-1/4	29	46-1/2	22-1/2	96-13/16	113-7/16	92-1/2	8	21-1/4	39-1/2	31-3/4	45-7/8	13/16	14-3/8	14-13/16

Size	S*	T	U*	V	W	X	Y	Z		AA	BB	CC	Max. Motor Frame	Approx. Ship Wt. Lbs. less mtr.**	
								Standard Duty	Heavy Duty					Standard Duty	Heavy Duty
70	-	14-7/8	24-7/8	6-3/16	6	10-1/8	9-1/4	1-3/16	1-7/16	8-13/16	8-3/8	13-3/8	184T	287	330
90	-	14-7/8	27-11/16	7	6	12-15/16	11-3/4	1-7/16	1-11/16	11-3/16	10-5/8	17-1/16	215T	382	439
110	14-3/8	16-1/2	28-3/4	8-13/16	8	15-3/4	14-7/16	1-7/16	1-15/16	13-3/4	13-1/16	20-13/16	256T	509	585
130	15-5/8	16-3/4	31-1/4	9-13/16	8	18-5/8	17	1-11/16	2-3/16	16-3/16	15-3/8	24-5/8	284T	670	770
150	16-3/4	21-1/2	33-1/2	10-11/16	8	21-1/2	19-3/4	1-15/16	2-7/16	18-7/8	18	28-3/8	286T	864	994
170	18-13/16	21-1/2	37-5/8	11-1/2	8	24-9/16	22-1/2	2-3/16	2-7/16	21-1/4	20-1/4	32-3/16	324T	1092	1255
190	19-9/16	22-3/4	39-1/8	12-5/16	8	27-1/8	24-7/8	2-7/16	2-15/16	23-3/4	22-5/8	35-13/16	364T	1353	1555
210	21-5/8	25-1/2	43-1/4	13-3/16	8	29-7/8	27-1/8	2-7/16	2-15/16	25-3/4	24-3/8	38-3/8	404T	1647	1894
230	22-1/8	26-7/8	44-1/4	15-1/8	8	32-13/16	29-13/16	2-11/16	3-7/16	28-5/16	26-13/16	42-5/8	405T	1974	2270
260	23-1/8	27-3/4	46-1/4	16-3/8	8	38-3/16	33-1/2	2-11/16	3-7/16	31-7/8	30-1/4	49-5/8	444T	2528	2907
290	23-5/8	28-3/4	47-1/4	17-5/8	8	42-11/16	37-5/8	2-15/16	3-7/16	35-3/4	33-7/8	54-7/8	444T	3157	3630

All dimensions in inches. \*F, G, S and U vary with motor size. Consult factory for exact dimensions. \*\*Shipping weights for MH model given.



# Arrangements 10 Dimension Data

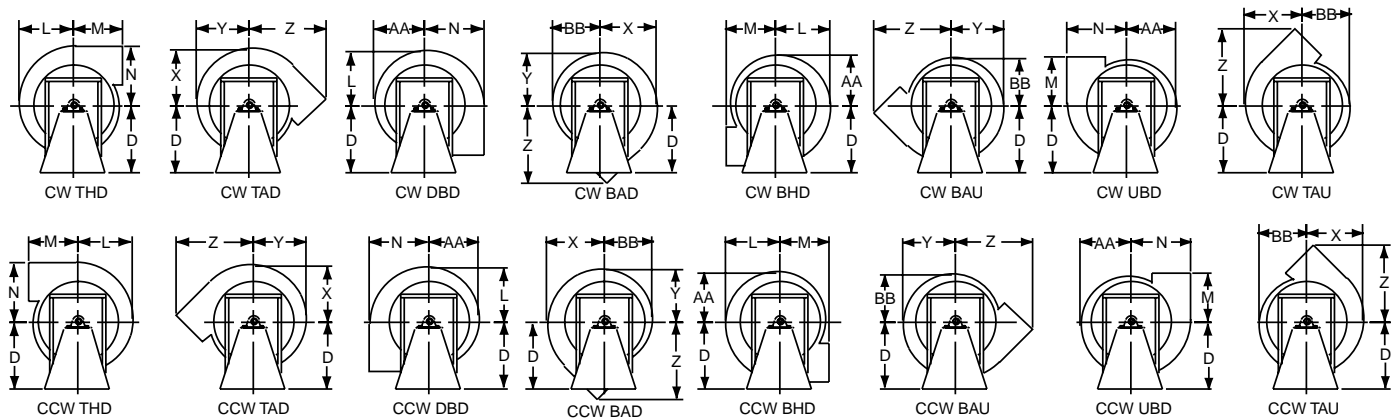


## Arrangement 10 Dimension Data

Size	A	B	C	D	E	F	G	H	J	K	L	M	N
70	6-5/8	5-7/8	7	18-3/4	9-11/16	21-1/16	26-1/4	29-5/16	4	9-3/16	9-11/16	8-5/16	10-9/16
90	8-7/16	7-1/2	9	18-3/4	9-11/16	21-7/8	27-7/8	32-1/4	4	9-3/16	12-5/16	10-5/8	13-1/2
110	10-3/8	9-1/8	11	18-3/4	9-11/16	25	32-7/8	35-3/16	4	9-3/16	15-1/16	13	16-7/16
130	12-3/16	10-7/8	13	21-3/4	11-3/4	26-3/16	34-7/8	41-3/16	5	11	17-13/16	15-3/8	19-7/16
150	14-1/16	12-9/16	15	25-1/4	13	31-3/4	41-5/16	47-5/8	5	12-1/4	20-5/8	17-3/4	22-3/8
170	16	14-1/4	17	28-1/4	13-7/8	32-9/16	43	53-5/8	6	13-1/8	23-3/4	20-1/8	25-3/8
190	17-13/16	15-7/8	19	31-1/4	15-5/16	34-11/16	46	59-1/2	6	14-9/16	25-15/16	22-7/16	28-1/4
210	19-3/4	17-9/16	21	34-1/2	16-9/16	38-1/4	50-3/8	65-3/4	6	15-13/16	28-1/2	23	31-1/4
230	21-5/8	19-1/4	23	37-1/2	18-13/16	41-1/8	55-1/4	71-13/16	7	17-9/16	31-1/4	26	34-5/16
260	24-7/16	21-3/4	26	41-3/4	20-5/8	43-15/16	58-11/16	82-15/16	7	19-3/8	35-1/8	29	41-3/16
290	27-5/16	24-1/4	29	46-1/2	22-1/2	45-9/16	62-3/16	92-1/2	8	21-1/4	39-1/2	31-3/4	45-7/8

Size	P	Q	R	S	T	U	W	X	Y	Z	AA	BB	Max. Mtr. Frame*	Approx. Ship Wt. Lbs. less mtr.**	
														Standard	Heavy Duty
70	9/16	-	14-7/8	4-1/4	1-3/16	6-3/16	6	10-1/8	9-1/4	13-3/8	8-13/16	8-3/8	184T	239	275
90	9/16	-	5-1/16	5-1/16	1-7/16	7	6	12-15/16	11-3/4	17-1/16	11-3/16	10-5/8	184T	318	366
110	9/16	8-1/4	6-1/2	6-1/2	1-7/16	8-13/16	8	15-3/4	14-7/16	20-13/16	13-3/4	13-1/16	215T	424	488
130	11/16	8-3/8	7-3/8	7-3/8	1-11/16	9-13/16	8	18-5/8	17	24-5/8	16-3/16	15-3/8	215T	558	642
150	11/16	10-3/4	8-7/32	8-7/32	1-15/16	10-11/16	8	21-1/2	19-3/4	28-3/8	18-7/8	18	256T	720	828
170	11/16	10-3/4	9-1/16	9-1/16	2-3/16	11-1/2	8	24-9/16	22-1/2	32-3/16	21-1/4	20-1/4	256T	910	1046
190	11/16	11-3/8	9-15/16	9-15/16	2-7/16	12-5/16	8	27-1/8	24-7/8	35-13/16	23-3/4	22-5/8	256T	1127	1296
210	11/16	12-3/4	10-21/32	10-21/32	2-7/16	13-3/16	8	29-7/8	27-1/8	38-3/8	25-3/4	24-3/8	326T	1372	1578
230	13/16	13-7/16	12-5/16	12-5/16	2-11/16	15-1/8	8	32-13/16	29-13/16	42-5/8	28-5/16	26-13/16	326T	1645	1892
260	13/16	13-7/16	13-9/16	13-9/16	2-11/16	16-3/8	8	38-3/16	33-1/2	49-5/8	31-7/8	30-1/4	326T	2107	2423
290	13/16	14-3/8	14-13/16	14-13/16	2-15/16	17-5/8	8	42-11/16	37-5/8	54-7/8	35-3/4	33-7/8	326T	2630	3025

All dimensions in inches. \*Based on single speed ODP motor. \*\*Shipping weights for MH model given.



## Flanged Inlet or Outlet



Flanged inlet or outlet connections allow for flange type duct attachment. Flanged inlet or outlet connections allow the fan to be removed without disturbing the surrounding ductwork. Flanges are factory mounted.

## Dampers



Dampers are available in gravity operation and motorized control. Motorized control dampers also are available for in-duct installation. Galvanized or aluminum construction is available. Dampers are shipped loose for field installation. Motorized control damper shown.

## Bolted or Hinged Access Door



Bolted or hinged access doors provide unrestricted access to the wheel for ease of maintenance and cleaning without removing the fan from the surrounding ductwork.

## Shaft Cooler



A shaft cooler is required for air temperature above 300°F. The shaft cooler is an aluminum casting with radial vanes mounted on the shaft between the inboard bearing and the fan housing. It is designed to dissipate heat which is conducted along the shaft. In addition, it prevents excessive bearing temperatures.

## Belt Guard, Arrangement 9 & 10

Factory installed belt guards cover drive components on all sides, and are split for quick access. Expanded metal construction is also available upon request.

## Isolation Base, Arrangement 1

The isolation base, arrangement 1, is used to provide a single integral support for the fan and motor in cases where the motor is not an integral part of the fan. Isolation bases are designed to run the full length of the supported equipment and motor. The base is constructed of structural steel channel (ASTM-A36) sized to resist belt pull and maintain proper alignment between the fan and the motor. All connections are fully welded. The isolation base requires an adjustable motor slide base for motor mounting. Isolation bases are provided with mounting holes at each of the four corners and are available with optional rubber-in-shear, spring floor, or housed springfloor isolators (set of four required). Optional height saving brackets are also available.

## Isolation Rails, Arrangement 9 & 10

Isolation rails are required for isolating any arrangement 9 & 10 IMH fan sizes 170 and above, unless the fan is supplied with an isolation or inertia base. Smaller fans may benefit from isolation rails if fan attachment points do not coincide with desired mounting locations. Isolation rails, supplied in pairs, are designed to run the full length of the supported equipment and can only be used on fans where the motor is an integral part of the fan. Each rail is constructed of rigid structural steel components coated with the standard factory finish, and are intended to be used in conjunction with two RIS Floor, Spring Floor, or Restrained Spring isolators depending on the needs of the application. They can also be used in ceiling mount applications with RIS Ceiling or Spring Ceiling Isolators. **Isolators are not included with the rails unless otherwise specified.** Optional seismic type isolators are also available; consult factory for more information.

## Additional Accessories

Companion Flange Inlet or Outlet

Drain

OSHA Shaft and Belt Guard

Weather Cover, Arrangement 9 & 10

Shaft Seal

High Temperature Paint (181°F - 800°F)

Heat Shield (Arrangement 9 & 10 301°F - 400°F; Arrangement 9 only 401°F - 800°F)

High Temperature Grease (301°F - 800°F)

High Temperature Bearings (401°F - 800°F)

# 70 MH/MHR Data

Wheel Diameter - 12-1/4 in.

Wheel Type - Radial Blade

Tip Speed (FPM) = 3.21 x RPM

Typical BHP = .069 (RPM / 1000)<sup>3</sup>

Inlet Area - .24 sq. ft. inside area

Outlet Area - .27 sq. ft. inside area

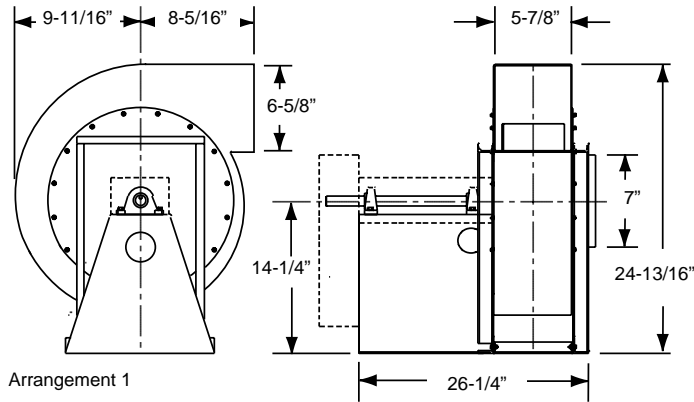
Outlet Velocity (FPM) = CFM/.27

Max. Motor Frame - 184T

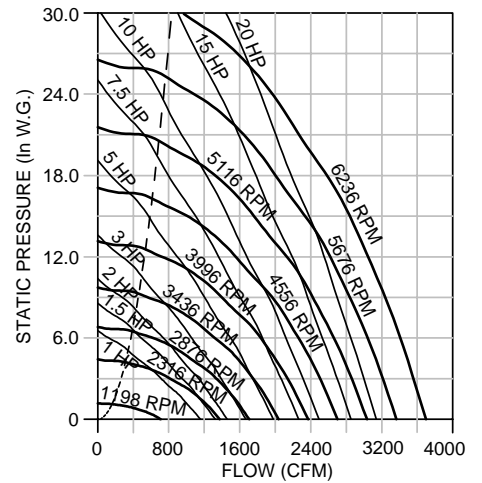
Approx. Ship Wt. - 239 lbs. (MH-SD Arr. 1)

## Maximum Speeds

Standard Duty
3742
Heavy Duty
6236



Arrangement 1



## 70 MH/MHR

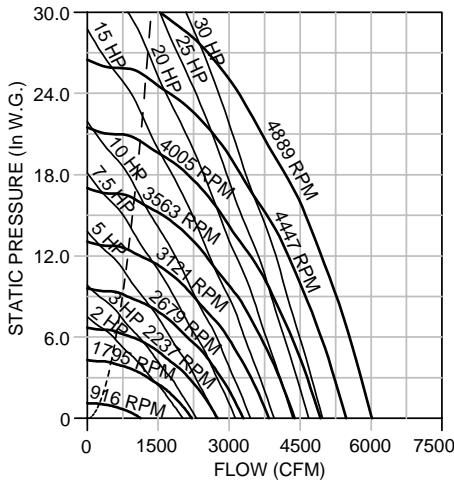
CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
300	1111	1198	.14	1632	.30	1970	.49												
500	1851	1365	.25	1745	.45	2063	.68	2341	.94	2591	1.22	2819	1.52	3028	1.83	3222	2.15	3403	2.48
700	2592	1569	.43	1923	.70	2206	.97	2462	1.26	2696	1.57	2913	1.91	3115	2.26	3307	2.63	3489	3.02
900	3333	1828	.74	2119	1.03	2397	1.38	2631	1.73	2845	2.08	3048	2.45	3239	2.83	3420	3.23	3593	3.65
1100	4074	2108	1.19	2356	1.53	2593	1.89	2826	2.32	3034	2.75	3221	3.17	3397	3.59	3567	4.03	3731	4.48
1300	4814	2405	1.80	2622	2.21	2826	2.60	3025	3.03	3227	3.52	3416	4.04	3588	4.54	3748	5.04	3900	5.54
1500	5555	2713	2.61	2901	3.07	3087	3.54	3261	3.99	3434	4.48	3609	5.02	3781	5.61	3943	6.21	4094	6.79
1700	6296	3030	3.66	3192	4.17	3359	4.70	3521	5.23	3675	5.75	3827	6.28	3981	6.87	4135	7.51	4286	8.18
1900	7037	3351	4.98	3494	5.53	3643	6.12	3792	6.72	3936	7.31	4074	7.88	4210	8.46	4346	9.09	4485	9.77
2100	7777	3677	6.60	3803	7.19	3936	7.83	4072	8.49	4207	9.15	4336	9.80	4462	10.4	4585	11.1	4707	11.7
2300	8518	4003	8.53	4120	9.19	4238	9.86	4362	10.6	4484	11.3	4608	12.0	4727	12.7	4842	13.4	4955	14.1
2500	9259	4330	10.8	4440	11.5	4548	12.3	4659	13.0	4770	13.8	4885	14.6	4998	15.4	5109	16.2	5216	16.9
2700	9999	4664	13.5	4760	14.3	4862	15.1	4961	15.8	5065	16.7	5171	17.5	5276	18.4	5381	19.2	5484	20.1
2900	10740	4996	16.7	5086	17.4	5176	18.2	5271	19.1	5368	20.0	5464	20.9	5562	21.8	5659	22.7	5756	23.6
3100	11481	5326	20.2	5413	21.1	5499	21.9	5586	22.8	5673	23.7	5764	24.7	5855	25.6	5946	26.6	6036	27.6
3300	12222	5655	24.2	5737	25.1	5819	26.1	5900	27.0	5982	28.0	6065	28.9	6152	30.0				

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
700	2592	3661	3.42	3826	3.84	3984	4.26	4134	4.70	4279	5.14	4418	5.58	4553	6.04	4683	6.50	4809	6.97
900	3333	3758	4.08	3917	4.54	4071	5.01	4219	5.49	4363	5.98	4502	6.49	4638	7.00	4769	7.53	4896	8.06
1100	4074	3888	4.94	4040	5.42	4187	5.92	4329	6.43	4467	6.95	4602	7.49	4732	8.04	4860	8.61	4984	9.18
1300	4814	4048	6.05	4191	6.56	4331	7.09	4467	7.63	4600	8.18	4729	8.74	4855	9.32	4978	9.91	5098	10.5
1500	5555	4235	7.37	4371	7.94	4502	8.52	4631	9.10	4756	9.69	4879	10.3	5000	10.9	5119	11.5	5235	12.2
1700	6296	4431	8.86	4567	9.52	4695	10.2	4819	10.8	4938	11.5	5055	12.1	5169	12.8	5282	13.5	5392	14.1
1900	7037	4623	10.5	4758	11.2	4889	12.0	5015	12.7	5134	13.5	5249	14.2	5360	14.9	5468	15.7	5573	16.4
2100	7777	4832	12.4	4958	13.2	5083	14.0	5206	14.8	5327	15.6	5444	16.5	5556	17.3	5664	18.1	5769	18.9
2300	8518	5067	14.8	5179	15.6	5293	16.3	5407	17.2	5522	18.0	5635	18.9	5747	19.8	5857	20.7	5963	21.7
2500	9259	5320	17.7	5424	18.4	5527	19.2	5630	20.0	5735	20.8	5839	21.7	5944	22.6	6050	23.6	6154	24.6
2700	9999	5584	20.9	5682	21.7	5779	22.5	5874	23.3	5969	24.2	6064	25.0	6161	25.9				
2900	10740	5853	24.5	5948	25.4	6040	26.3	6131	27.2	6221	28.0								

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
900	3333	5020	8.60	5141	9.15	5259	9.71	5374	10.3	5486	10.8	5595	11.4	5702	12.0	5807	12.6	5910	13.2
1100	4074	5106	9.77	5226	10.4	5343	11.0	5457	11.6	5569	12.2	5679	12.8	5786	13.5	5892	14.1	5996	14.8
1300	4814	5216	11.1	5331	11.8	5444	12.4	5555	13.1	5663	13.7	5771	14.4	5876	15.1	5980	15.8	6082	16.5
1500	5555	5348	12.8	5460	13.5	5569	14.1	5677	14.8	5782	15.5	5886	16.2	5988	16.9	6088	17.6	6188	18.3
1700	6296	5501	14.8	5609	15.5	5714	16.2	5818	16.9	5920	17.6	6021	18.3	6120	19.1	6218	19.8		
1900	7037	5677	17.1	5778	17.9	5880	18.6	5978	19.3	6077	20.1	6174	20.9						
2100	7777	5870	19.7	5969	20.5	6066	21.3	6161	22.1										

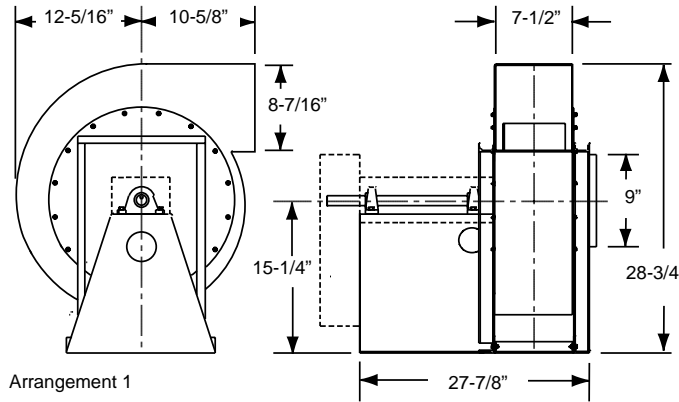
Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream. AMCA certification does not apply to MHR fans.

# Data MH/MHR 90



**Wheel Diameter** - 15-5/8 in.  
**Wheel Type** - Radial Blade  
**Tip Speed FPM** - 4.09 x RPM  
**Typical BHP** = .24 (RPM/1000)<sup>3</sup>  
**Inlet Area** = .41 sq. ft. inside area

**Outlet Area** = .44 sq. ft. inside area  
**Outlet Velocity (FPM)** = CFM/.44  
**Max. Motor Frame** - 184T (Arr. 9 & 10)  
**Approx. Ship Wt.** - 318 lbs. (MH-SD Arr. 1)



Maximum Speeds	
Standard Duty	2934
Heavy Duty	4889

## 90 MH/MHR

CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
400	909	916	.19	1262	.43														
800	1818	1064	.40	1364	.72	1614	1.09	1833	1.51	2030	1.96	2208	2.44	2372	2.94	2524	3.46	2666	4.00
1200	2727	1267	.79	1537	1.23	1756	1.69	1953	2.17	2134	2.69	2302	3.24	2459	3.83	2608	4.45	2749	5.09
1600	3636	1523	1.48	1734	1.97	1942	2.57	2128	3.20	2290	3.81	2442	4.43	2588	5.08	2727	5.75	2860	6.45
2000	4545	1802	2.54	1982	3.17	2147	3.77	2315	4.48	2478	5.27	2625	6.05	2759	6.81	2886	7.58	3008	8.35
2400	5454	2097	4.06	2247	4.81	2395	5.56	2533	6.28	2671	7.07	2811	7.96	2947	8.91	3074	9.86	3191	10.8
2800	6363	2402	6.16	2527	6.99	2658	7.88	2784	8.76	2903	9.59	3020	10.5	3139	11.4	3260	12.5	3378	13.6
3200	7272	2711	8.9	2821	9.85	2933	10.8	3046	11.8	3158	12.9	3263	13.8	3366	14.8	3469	15.8	3573	16.9
3600	8181	3027	12.4	3122	13.5	3220	14.5	3320	15.7	3421	16.8	3520	17.9	3616	19.0	3709	20.1	3800	21.2
4000	9090	3340	16.8	3428	17.9	3515	19.1	3603	20.3	3695	21.6	3786	22.8	3876	24.1	3963	25.3	4048	26.5
4400	10000	3662	22.1	3737	23.3	3817	24.6	3895	25.9	3977	27.2	4060	28.6	4143	30.0	4225	31.4	4306	32.8
4800	10909	3981	28.4	4051	29.8	4121	31.1	4193	32.5	4268	33.9	4342	35.4	4417	36.9	4493	38.4	4570	40.0
5200	11818	4299	35.9	4365	37.3	4432	38.8	4498	40.3	4565	41.8	4633	43.4	4701	45.0	4771	46.6	4842	48.3
5600	12727	4614	44.4	4677	46.0	4741	47.6	4804	49.3	4866	50.9								

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	2727	2884	5.76	3013	6.45	3136	7.15	3255	7.88	3369	8.62	3478	9.36	3584	10.1	3686	10.9	3785	11.7
1600	3636	2988	7.19	3110	7.94	3228	8.73	3342	9.53	3453	10.4	3561	11.2	3666	12.1	3768	13.0	3867	13.9
2000	4545	3127	9.15	3242	9.97	3355	10.8	3463	11.7	3569	12.6	3672	13.5	3772	14.4	3870	15.3	3965	16.3
2400	5454	3302	11.7	3409	12.6	3512	13.5	3614	14.5	3713	15.4	3811	16.4	3906	17.4	3999	18.4	4091	19.4
2800	6363	3491	14.7	3598	15.8	3699	16.9	3796	17.9	3889	19.0	3979	20.1	4068	21.1	4156	22.2	4242	23.3
3200	7272	3677	18.0	3783	19.3	3885	20.6	3984	21.8	4078	23.1	4169	24.4	4255	25.6	4339	26.8	4421	28.0
3600	8181	3891	22.3	3983	23.5	4077	24.8	4170	26.2	4263	27.6	4353	29.0	4443	30.4	4528	31.9	4611	33.3
4000	9090	4131	27.7	4213	28.9	4294	30.2	4376	31.5	4461	32.9	4545	34.3	4629	35.8	4712	37.4	4796	39.0
4400	10000	4384	34.1	4461	35.5	4537	36.8	4611	38.1	4685	39.4	4760	40.8	4835	42.3				
4800	10909	4645	41.5	4719	43.0	4790	44.5	4860	45.9										

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	2727	3882	12.5	3976	13.3	4067	14.1												
1600	3636	3965	14.8	4059	15.7	4152	16.7	4242	17.6	4330	18.6	4416	19.5	4501	20.5	4583	21.5	4664	22.5
2000	4545	4058	17.3	4150	18.3	4239	19.3	4328	20.4	4414	21.4	4499	22.5	4582	23.6	4664	24.7	4745	25.8
2400	5454	4181	20.5	4269	21.5	4355	22.6	4440	23.7	4523	24.8	4605	26.0	4685	27.1	4764	28.3	4842	29.4
2800	6363	4327	24.4	4411	25.6	4493	26.7	4575	27.9	4655	29.0	4734	30.2	4811	31.4	4889	32.7		
3200	7272	4501	29.2	4580	30.4	4657	31.7	4734	32.9	4810	34.2	4885	35.4						
3600	8181	4691	34.7	4768	36.1	4844	37.4												
4000	9090	4876	40.5																

Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream. AMCA certification does not apply to MHR fans.



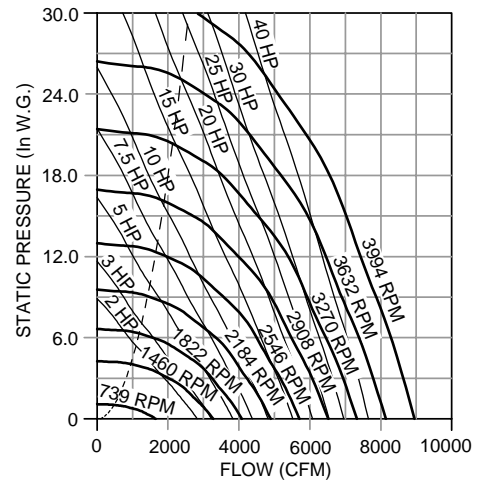
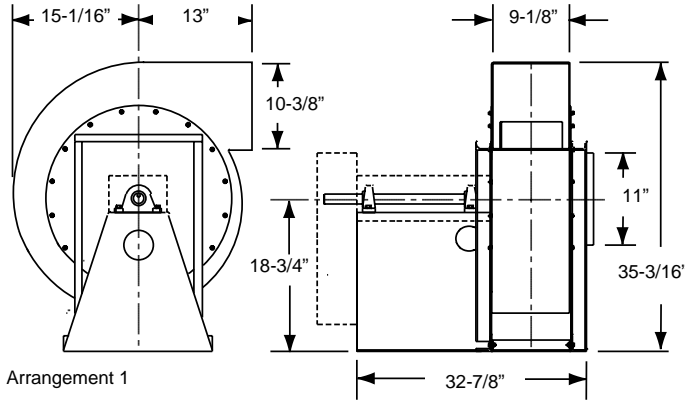
# 110 MH/MHR Data

Wheel Diameter - 19-1/8 in.  
 Wheel Type - Radial Blade  
 Tip Speed FPM - 5.01 x RPM  
 Typical BHP = .52 (RPM/1000)<sup>3</sup>  
 Inlet Area = .62 sq. ft. inside area

Outlet Area = .66 sq. ft. inside area  
 Outlet Velocity (FPM) = CFM/.66  
 Max. Motor Frame - 215T (Arr. 9 & 10)  
 Approx. Ship Wt. - 424 lbs. (MH-SD Arr. 1)

## Maximum Speeds

Standard Duty
2397
Heavy Duty
3994



## 110 MH/MHR

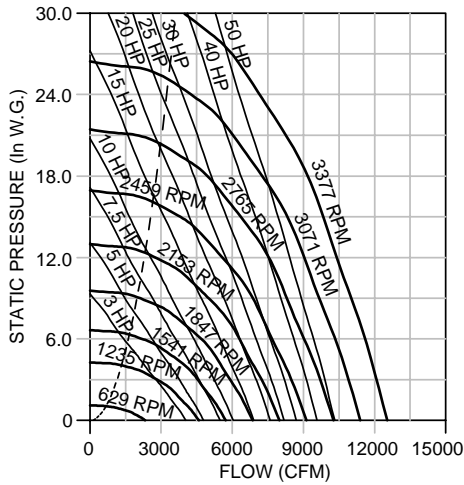
CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
600	909	739	.19																
1200	1818	850	.44	1094	.78	1298	1.13	1477	1.52	1635	1.95								
1800	2727	1026	.93	1227	1.37	1410	1.86	1567	2.37	1712	2.89	1849	3.42	1979	3.97	2101	4.55	2216	5.15
2400	3636	1248	1.76	1400	2.32	1552	2.90	1701	3.52	1838	4.19	1962	4.87	2077	5.55	2188	6.24	2294	6.93
3000	4545	1476	3.02	1618	3.75	1735	4.44	1855	5.16	1978	5.90	2097	6.68	2210	7.50	2316	8.34	2416	9.19
3600	5454	1720	4.89	1841	5.71	1954	6.58	2052	7.41	2149	8.25	2251	9.12	2353	10.0	2454	10.9	2551	11.9
4200	6363	1972	7.45	2071	8.34	2177	9.35	2272	10.4	2357	11.3	2439	12.3	2523	13.3	2611	14.3	2699	15.3
4800	7272	2228	10.8	2312	11.8	2403	12.9	2495	14.1	2579	15.2	2655	16.3	2727	17.4	2800	18.6	2874	19.7
5400	8181	2486	15.1	2561	16.2	2638	17.3	2721	18.6	2802	19.9	2878	21.2	2947	22.5	3013	23.8	3078	25.0
6000	9090	2747	20.5	2814	21.7	2881	22.9	2953	24.2	3027	25.6	3101	27.1	3171	28.5	3235	30.0	3296	31.4
6600	9999	3011	27.0	3068	28.3	3131	29.6	3194	31.0	3258	32.4	3327	34.0	3394	35.6	3458	37.2	3520	38.8
7200	10909	3274	34.9	3329	36.2	3384	37.6	3439	39.1	3497	40.6	3558	42.2	3620	43.9	3682	45.7	3743	47.4
7800	11818	3534	43.9	3586	45.5	3637	47.0	3689	48.5	3741	50.1	3795	51.8	3852	53.6	3909	55.4	3967	57.3
8400	12727	3798	54.6	3847	56.3	3896	58.0	3944	59.6	3992	61.3								

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800	2727	2324	5.77	2428	6.41	2527	7.07												
2400	3636	2398	7.64	2499	8.35	2597	9.09	2691	9.83	2782	10.6	2869	11.4	2954	12.2	3036	13.0	3117	13.9
3000	4545	2511	10.0	2602	10.9	2691	11.8	2777	12.6	2862	13.5	2946	14.4	3028	15.2	3108	16.1	3187	17.0
3600	5454	2645	12.9	2735	13.9	2820	14.9	2903	15.9	2982	16.9	3060	18.0	3135	19.0	3209	20.0	3281	21.0
4200	6363	2787	16.4	2873	17.5	2956	18.6	3037	19.7	3116	20.9	3192	22.1	3266	23.3	3338	24.5	3407	25.6
4800	7272	2949	20.8	3026	22.0	3103	23.2	3180	24.4	3256	25.7	3329	26.9	3402	28.2	3473	29.5	3542	30.8
5400	8181	3142	26.3	3208	27.5	3274	28.8	3341	30.1	3410	31.4	3478	32.8	3547	34.1	3614	35.5	3681	36.9
6000	9090	3355	32.8	3413	34.1	3471	35.6	3529	36.9	3589	38.4	3649	39.8	3709	41.2	3771	42.7	3833	44.2
6600	9999	3577	40.4	3632	41.9	3685	43.4	3738	45.0	3790	46.5	3843	48.0	3897	49.6	3951	51.2		
7200	10909	3800	49.2	3855	50.9	3907	52.6	3958	54.3										

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2400	3636	3194	14.7	3271	15.6	3345	16.5	3417	17.4	3489	18.3								
3000	4545	3265	18.0	3340	18.9	3414	19.9	3486	20.8	3556	21.8	3625	22.8	3693	23.8	3759	24.9	3824	25.9
3600	5454	3352	22.1	3424	23.1	3493	24.2	3562	25.2	3631	26.3	3698	27.4	3765	28.5	3830	29.5	3895	30.7
4200	6363	3476	26.8	3542	28.0	3607	29.2	3671	30.4	3735	31.6	3797	32.8	3859	34.0	3920	35.2	3981	36.5
4800	7272	3609	32.2	3675	33.5	3739	34.9	3802	36.2	3864	37.6	3924	39.0	3983	40.3				
5400	8181	3747	38.3	3811	39.8	3875	41.3	3937	42.7										
6000	9090	3894	45.7	3956	47.2														

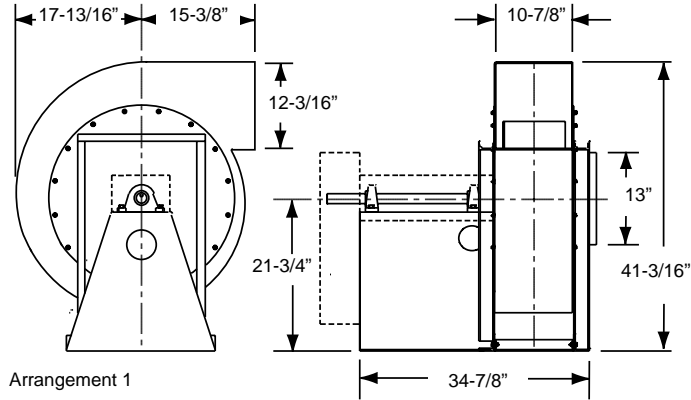
Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream. AMCA certification does not apply to MHR fans.

# Data MH/MHR 130



**Wheel Diameter** - 22-5/8 in.  
**Wheel Type** - Radial Blade  
**Tip Speed FPM** - 5.92 x RPM  
**Typical BHP** = 1.20 (RPM/1000)<sup>3</sup>  
**Inlet Area** = .87 sq. ft. inside area

**Outlet Area** = .92 sq. ft. inside area  
**Outlet Velocity (FPM)** = CFM/.92  
**Max. Motor Frame** - 215T (Arr. 9 & 10)  
**Approx. Ship Wt.** - 558 lbs. (MH-SD Arr. 1)



Maximum Speeds	
Standard Duty	2026
Heavy Duty	3377

## 130 MH/MHR

CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
900	967	629	.28																
1800	1935	736	.69	939	1.19	1107	1.71	1257	2.27	1391	2.88	1512	3.53						
2700	2903	907	1.50	1064	2.15	1216	2.87	1348	3.63	1467	4.40	1579	5.18	1686	5.98	1789	6.81	1886	7.67
3600	3870	1109	2.90	1234	3.74	1352	4.60	1472	5.50	1586	6.47	1691	7.48	1787	8.49	1878	9.51	1965	10.5
4500	4838	1320	5.06	1435	6.13	1531	7.18	1624	8.25	1720	9.33	1817	10.5	1910	11.6	1999	12.9	2083	14.1
5400	5806	1545	8.25	1639	9.45	1732	10.7	1813	12.0	1889	13.3	1967	14.5	2048	15.9	2128	17.2	2209	18.6
6300	6774	1774	12.6	1852	13.9	1935	15.4	2015	16.9	2086	18.4	2152	19.9	2217	21.4	2283	22.8	2352	24.4
7200	7741	2009	18.5	2075	19.9	2144	21.4	2218	23.2	2288	24.9	2352	26.6	2411	28.3	2468	30.0	2526	31.7
8100	8709	2243	25.8	2302	27.4	2363	29.1	2426	30.9	2491	32.9	2554	34.8	2613	36.8	2668	38.7	2720	40.6
9000	9677	2483	35.1	2532	36.7	2587	38.6	2641	40.5	2699	42.6	2757	44.7	2815	46.9	2870	49.1	2921	51.2
9900	10645	2721	46.3	2768	48.2	2815	50.1	2863	52.1	2913	54.2	2966	56.5	3020	58.9	3072	61.2	3123	63.6
10800	11612	2957	59.6	3001	61.7	3045	63.8	3089	66.0	3134	68.2	3181	70.6	3229	73.0	3278	75.6	3327	78.2
11700	12580	3195	75.3	3237	77.7	3278	80.0	3319	82.3	3360	84.7								

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2700	2903	1977	8.55	2064	9.47	2148	10.4	2228	11.4	2306	12.4	2381	13.4						
3600	3870	2050	11.6	2133	12.6	2213	13.7	2292	14.8	2369	15.9	2443	17.0	2514	18.2	2584	19.4	2651	20.5
4500	4838	2163	15.4	2239	16.7	2312	17.9	2383	19.2	2453	20.5	2520	21.8	2588	23.1	2653	24.4	2719	25.8
5400	5806	2286	20.0	2361	21.5	2433	23.0	2502	24.5	2569	26.0	2634	27.5	2697	29.1	2758	30.6	2817	32.1
6300	6774	2421	25.9	2491	27.5	2559	29.1	2627	30.7	2692	32.4	2756	34.1	2818	35.9	2878	37.6	2937	39.4
7200	7741	2584	33.3	2643	35.1	2703	36.8	2764	38.6	2824	40.3	2885	42.2	2945	44.1	3003	45.9	3061	47.9
8100	8709	2770	42.4	2821	44.3	2872	46.2	2925	48.2	2978	50.1	3031	52.0	3085	54.0	3139	56.0	3192	58.0
9000	9677	2970	53.3	3017	55.4	3063	57.5	3109	59.6	3154	61.7	3201	63.8	3247	65.9	3295	68.1	3342	70.2
9900	10645	3172	66.0	3218	68.4	3263	70.8	3306	73.1	3348	75.4								
10800	11612	3375	80.8																

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3600	3870	2717	21.8	2781	23.0	2844	24.3	2905	25.6	2965	26.9	3023	28.2	3081	29.6	3137	30.9		
4500	4838	2783	27.1	2846	28.5	2908	29.8	2968	31.2	3028	32.6	3086	34.0	3143	35.5	3199	37.0	3254	38.5
5400	5806	2876	33.6	2934	35.2	2991	36.8	3047	38.3	3103	39.9	3158	41.5	3212	43.0	3267	44.6	3320	46.2
6300	6774	2994	41.2	3050	43.0	3104	44.7	3158	46.5	3210	48.3	3262	50.1	3312	51.9	3363	53.7		
7200	7741	3117	49.8	3172	51.8	3226	53.8	3279	55.8	3331	57.8								
8100	8709	3247	60.1	3300	62.2	3352	64.3												

Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream. AMCA certification does not apply to MHR fans.

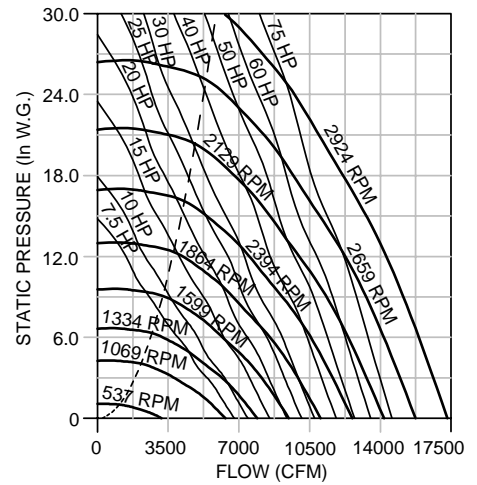
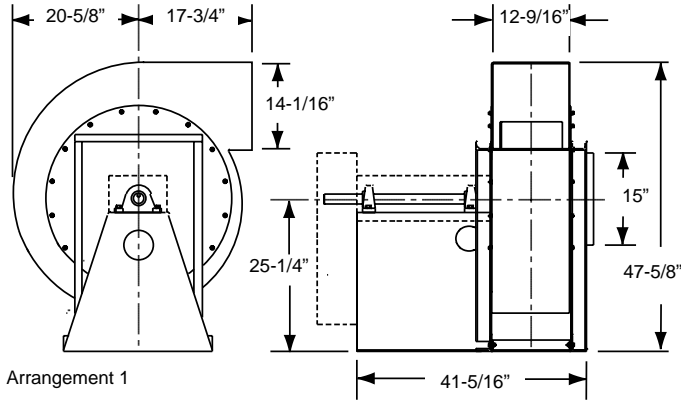
# 150 MH/MHR Data

Wheel Diameter - 26-1/8 in.  
 Wheel Type - Radial Blade  
 Tip Speed FPM - 6.84 x RPM  
 Typical BHP = 2.64 (RPM/1000)<sup>3</sup>  
 Inlet Area = 1.17 sq. ft. inside area

Outlet Area = 1.23 sq. ft. inside area  
 Outlet Velocity (FPM) = CFM/1.23  
 Max. Motor Frame - 256T (Arr. 9 & 10)  
 Approx. Ship Wt. - 720 lbs. (MH-SD Arr. 1)

## Maximum Speeds

Standard Duty
1755
Heavy Duty
2924



## 150 MH/MHR

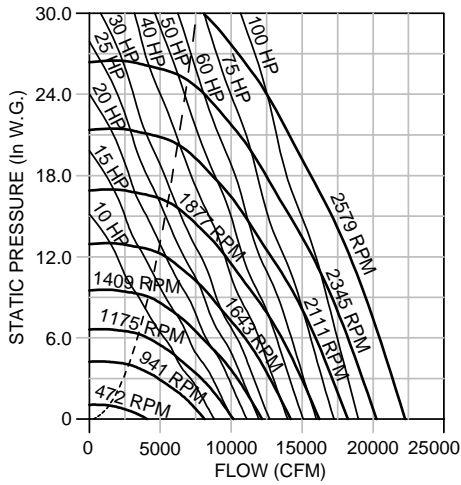
CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	967	537	.37																
2400	1935	639	.92	809	1.52	950	2.23	1073	2.96										
3600	2903	775	1.89	925	2.87	1048	3.69	1160	4.60	1264	5.66	1359	6.74	1447	7.82	1530	8.90	1610	10.0
4800	3870	939	3.68	1060	4.74	1176	6.10	1277	7.33	1368	8.39	1454	9.49	1537	10.7	1617	12.1	1693	13.6
6000	4838	1118	6.50	1216	7.73	1313	9.07	1408	10.7	1496	12.4	1577	14.0	1652	15.3	1724	16.7	1793	18.0
7200	5806	1305	10.6	1388	12.1	1469	13.5	1550	15.1	1630	16.9	1708	19.0	1781	21.1	1851	23.0	1916	24.8
8400	6774	1496	16.2	1568	17.9	1638	19.6	1708	21.4	1777	23.1	1847	25.1	1915	27.4	1982	29.8	2046	32.2
9600	7741	1690	23.5	1753	25.5	1816	27.5	1877	29.4	1938	31.4	1999	33.5	2060	35.6	2120	37.9	2180	40.5
10800	8709	1885	32.9	1942	35.1	1999	37.4	2054	39.6	2109	41.8	2163	44.0	2217	46.3	2271	48.6	2325	51.0
12000	9677	2084	44.6	2135	47.1	2186	49.5	2236	52.0	2285	54.4	2334	56.9	2383	59.3	2431	61.8	2481	64.4
13200	10645	2283	58.9	2329	61.5	2374	64.1	2421	66.9	2467	69.7	2512	72.4	2556	75.0	2600	77.7	2645	80.5
14400	11612	2481	75.8	2525	78.8	2568	81.7	2610	84.7	2652	87.6	2693	90.5	2734	93.5	2775	96.4	2816	99.4
15600	12580	2677	95.5	2718	98.7	2759	102	2799	105	2839	109	2878	112	2916	115				
16800	13548	2876	119	2918	123.														

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3600	2903	1687	11.1																
4800	3870	1765	15.0	1834	16.4	1900	17.9	1964	19.3	2027	20.8	2087	22.2	2146	23.70	2205	25.2	2261	26.7
6000	4838	1860	19.5	1926	21.1	1990	22.8	2052	24.6	2113	26.4	2171	28.2	2228	30.00	2283	31.8	2336	33.6
7200	5806	1978	26.4	2038	28.0	2096	29.5	2154	31.2	2210	33.0	2265	34.8	2320	36.80	2373	38.8	2426	41.0
8400	6774	2107	34.6	2166	36.8	2222	38.8	2275	40.7	2328	42.6	2379	44.4	2429	46.3	2478	48.2	2527	50.2
9600	7741	2239	43.2	2296	46.0	2351	48.8	2405	51.5	2456	54.0	2506	56.4	2555	58.7	2601	60.8	2647	63.0
10800	8709	2379	53.7	2432	56.5	2485	59.5	2536	62.6	2587	65.7	2636	68.9	2684	71.9	2731	74.9	2776	77.7
12000	9677	2529	67.0	2578	69.7	2626	72.5	2674	75.6	2722	78.8	2769	82.2	2816	85.7	2861	89.1	2906	92.7
13200	10645	2689	83.2	2734	86.0	2778	88.9	2822	91.8	2866	94.9	2910	98.2						
14400	11612	2857	102	2897	105														

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6000	4838	2388	35.4	2440	37.2	2490	39.0	2540	40.9	2588	42.7	2636	44.5	2683	46.3	2730	48.2	2776	50.1
7200	5806	2477	43.1	2527	45.2	2576	47.4	2624	49.5	2671	51.7	2717	53.9	2762	56.0	2807	58.2	2851	60.4
8400	6774	2575	52.2	2623	54.4	2670	56.6	2717	59.0	2762	61.3	2808	63.8	2852	66.2	2896	68.8		
9600	7741	2693	65.1	2737	67.2	2781	69.4	2824	71.5	2867	73.8	2909	76.0						
10800	8709	2820	80.3	2863	82.9	2905	85.4												

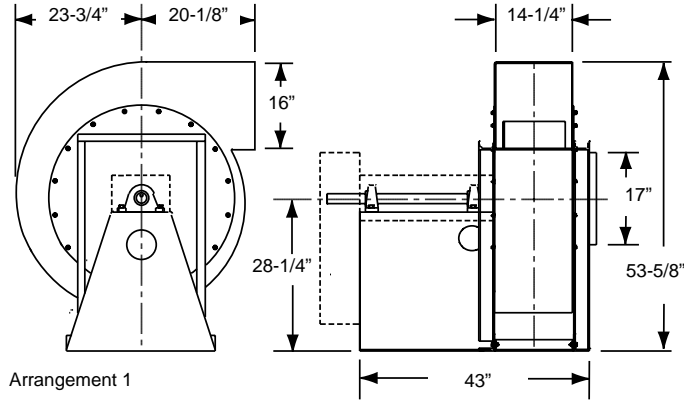
Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream. AMCA certification does not apply to MHR fans.

# Data MH/MHR 170



**Wheel Diameter** - 29-5/8 in.  
**Wheel Type** - Radial Blade  
**Tip Speed FPM** - 7.76 x RPM  
**Typical BHP** = 4.94 (RPM/1000)<sup>3</sup>  
**Inlet Area** = 1.51 sq. ft. inside area

**Outlet Area** = 1.58 sq. ft. inside area  
**Outlet Velocity (FPM)** = CFM/1.58  
**Max. Motor Frame** - 256T (Arr. 9 & 10)  
**Approx. Ship Wt.** - 910 lbs. (MH-SD Arr. 1)



Maximum Speeds	
Standard Duty	1547
Heavy Duty	2579

## 170 MH/MHR

CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	943	472	.46																
3000	1886	557	1.12	709	1.89	834	2.79	944	3.71										
4500	2830	673	2.29	807	3.52	916	4.53	1016	5.71	1108	7.04	1192	8.39	1271	9.76	1345	11.1	1416	12.5
6000	3773	811	4.41	921	5.76	1024	7.47	1114	8.95	1196	10.3	1273	11.7	1347	13.4	1418	15.1	1485	16.9
7500	4716	963	7.74	1052	9.28	1140	11.0	1226	13.1	1304	15.2	1376	17.1	1443	18.8	1506	20.4	1568	22.2
9000	5660	1123	12.6	1198	14.4	1272	16.3	1345	18.3	1418	20.7	1487	23.3	1553	25.9	1614	28.2	1671	30.2
10500	6603	1286	19.2	1351	21.3	1415	23.5	1478	25.7	1542	28.0	1604	30.5	1666	33.5	1725	36.5	1782	39.5
12000	7547	1452	27.9	1510	30.4	1566	32.8	1622	35.3	1677	37.8	1733	40.4	1788	43.1	1842	46.1	1896	49.4
13500	8490	1620	39.0	1671	41.7	1722	44.5	1772	47.3	1821	50.0	1871	52.9	1920	55.7	1969	58.7	2018	61.8
15000	9433	1788	52.7	1836	55.9	1881	58.90	1927	62.0	1972	65.1	2016	68.1	2060	71.2	2105	74.4	2149	77.6
16500	10377	1959	69.5	2000	72.8	2043	76.2	2085	79.7	2126	83.1	2167	86.5	2207	89.8	2248	93.2	2288	96.6
18000	11320	2130	89.6	2169	93.3	2208	97.0	2246	101	2284	104	2321	108	2358	112	2395	115	2433	119
19500	12264	2298	113	2336	117	2372	121	2407	125	2443	129	2478	133	2513	137	2548	141		
21000	13207	2468	140	2504	145	2539	149	2573	154										

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6000	3773	1549	18.7	1610	20.5	1669	22.3	1726	24.1	1781	26.0	1835	27.8	1888	29.7	1940	31.6		
7500	4716	1629	24.1	1687	26.2	1744	28.4	1800	30.6	1853	32.9	1905	35.2	1955	37.4	2004	39.7	2051	41.9
9000	5660	1727	32.2	1780	34.2	1832	36.2	1884	38.4	1934	40.7	1984	43.2	2033	45.7	2080	48.3	2127	51.0
10500	6603	1837	42.4	1888	45.0	1938	47.4	1986	49.8	2033	52.1	2078	54.4	2123	56.7	2167	59.2	2211	61.8
12000	7547	1949	52.9	2000	56.4	2049	59.8	2096	63.1	2142	66.1	2186	68.9	2229	71.7	2270	74.3	2311	76.9
13500	8490	2067	65.3	2115	68.9	2162	72.8	2208	76.7	2253	80.6	2297	84.5	2339	88.1	2381	91.7	2420	94.9
15000	9433	2193	80.9	2237	84.4	2281	88.1	2325	92.2	2368	96.4	2410	101	2451	105	2492	109.	2532	114.
16500	10377	2328	100	2368	104	2409	107	2449	111	2489	115	2528	119	2567	124				
18000	11320	2470	123	2506	127	2543	130												

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7500	4716	2098	44.2	2143	46.4	2188	48.7	2232	51.0	2275	53.3	2318	55.6	2360	57.9	2402	60.3	2443	62.7
9000	5660	2172	53.7	2217	56.4	2260	59.1	2303	61.8	2344	64.5	2385	67.2	2425	69.9	2464	72.6	2503	75.3
10500	6603	2254	64.5	2297	67.3	2339	70.3	2381	73.3	2421	76.3	2462	79.5	2501	82.5	2540	85.7	2578	88.9
12000	7547	2351	79.6	2391	82.3	2430	85.0	2469	87.8	2507	90.7	2545	93.7						
13500	8490	2460	98.2	2497	101	2535	104	2572	107										
15000	9433	2571	118																

Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream. AMCA certification does not apply to MHR fans.

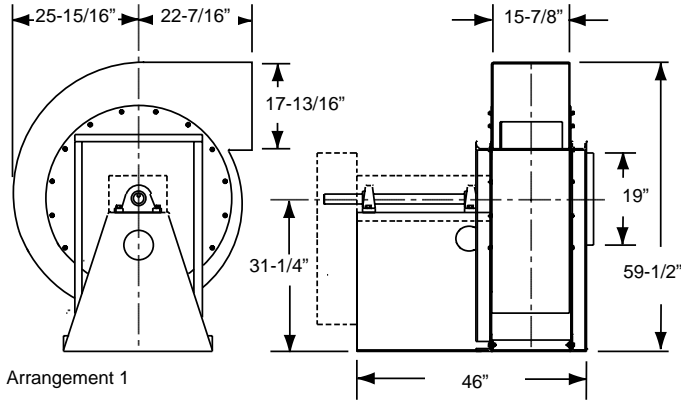
# 190 MH/MHR Data

**Wheel Diameter** - 33 in.  
**Wheel Type** - Radial Blade  
**Tip Speed FPM** - 8.64 x RPM  
**Typical BHP** = 8.61 (RPM/1000)<sup>3</sup>  
**Inlet Area** = 1.90 sq. ft. inside area

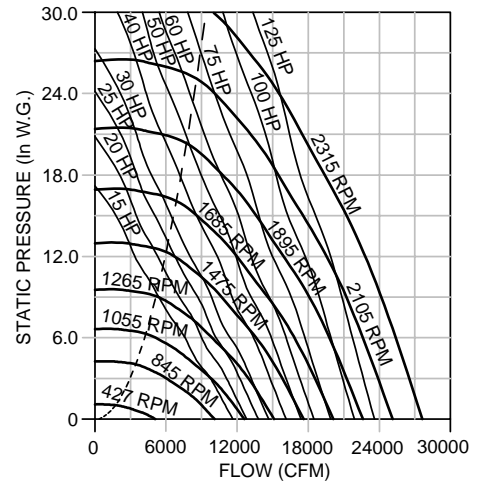
**Outlet Area** = 1.96 sq. ft. inside area  
**Outlet Velocity (FPM)** = CFM/1.96  
**Max. Motor Frame** - 256T (Arr. 9 & 10)  
**Approx. Ship Wt.** - 1127 lbs. (MH-SD Arr. 1)

## Maximum Speeds

Standard Duty
1389
Heavy Duty
2315



Arrangement 1



## 190 MH/MHR

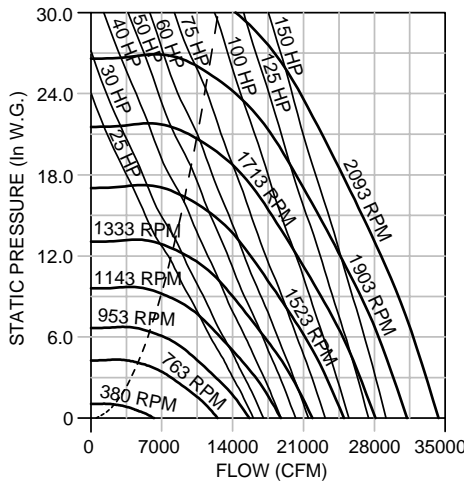
CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2000	1015	427	.62																
4000	2030	515	1.58	647	2.55	758	3.73	855	4.95	943	6.19								
6000	3045	630	3.32	746	4.94	843	6.36	929	7.77	1010	9.46	1085	11.3	1155	13.1	1220	14.9	1282	16.7
8000	4060	768	6.55	860	8.26	949	10.4	1029	12.6	1101	14.5	1167	16.2	1232	18.2	1294	20.4	1353	22.7
10000	5076	918	11.6	992	13.7	1066	15.8	1139	18.4	1208	21.3	1272	24.1	1331	26.5	1386	28.7	1440	30.9
12000	6091	1073	19.0	1136	21.5	1198	23.9	1259	26.5	1320	29.3	1380	32.6	1438	36.1	1493	39.6	1544	42.6
14000	7106	1232	29.2	1287	32.0	1340	34.9	1393	37.8	1446	40.7	1498	43.8	1551	47.4	1602	51.2	1652	55.2
16000	8121	1393	42.5	1442	45.8	1489	49.1	1535	52.3	1582	55.7	1628	59.0	1674	62.4	1720	66.1	1766	70.1
18000	9137	1554	59.4	1599	63.2	1642	67.0	1683	70.6	1725	74.3	1766	78.0	1807	81.7	1848	85.5	1889	89.4
20000	10152	1720	80.8	1758	84.8	1797	88.9	1835	93.0	1873	97.2	1910	101	1947	105	1984	109	2021	114
22000	11167	1884	107	1920	111	1955	116	1990	120	2024	125	2058	129	2092	134	2126	138	2160	143
24000	12182	2047	137	2081	142	2114	147	2146	152	2178	157	2210	162	2241	167	2272	172	2303	177
26000	13197	2211	173	2243	179	2275	184	2305	190										

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6000	3045	1342	18.50	1400	20.4														
8000	4060	1410	25.1	1465	27.5	1517	29.9	1567	32.3	1616	34.7	1663	37.1	1709	39.5	1755	42.0	1799	44.5
10000	5076	1492	33.2	1543	35.7	1593	38.4	1641	41.2	1689	44.2	1735	47.2	1779	50.1	1823	53.2	1865	56.1
12000	6091	1593	45.5	1640	48.2	1685	50.8	1730	53.5	1773	56.2	1816	59.1	1858	62.2	1900	65.4	1941	68.8
14000	7106	1700	59.3	1747	63.3	1791	66.9	1833	70.2	1874	73.5	1914	76.6	1953	79.6	1991	82.7	2029	85.9
16000	8121	1811	74.4	1855	78.9	1899	83.7	1941	88.3	1981	92.7	2021	97.1	2059	101	2096	105	2132	109
18000	9137	1930	93.5	1971	98.0	2011	103	2051	108	2090	113	2129	118	2166	123	2203	128	2239	133
20000	10152	2058	118	2095	122	2132	127	2168	131	2205	137	2241	142	2277	147	2312	153		
22000	11167	2193	147	2227	152	2261	156	2294	161										

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
8000	4060	1843	47.0	1886	49.5														
10000	5076	1906	59.1	1947	62.2	1986	65.2	2025	68.2	2063	71.2	2100	74.2	2137	77.3	2173	80.3	2209	83.4
12000	6091	1981	72.2	2020	75.7	2059	79.3	2097	82.9	2134	86.5	2170	90.1	2206	93.7	2241	97.3	2275	101
14000	7106	2067	89.2	2103	92.4	2140	96.0	2176	99.6	2211	103	2247	107	2281	111				
16000	8121	2167	112	2201	116	2236	119	2269	123	2303	127								
18000	9137	2274	138	2308	143														

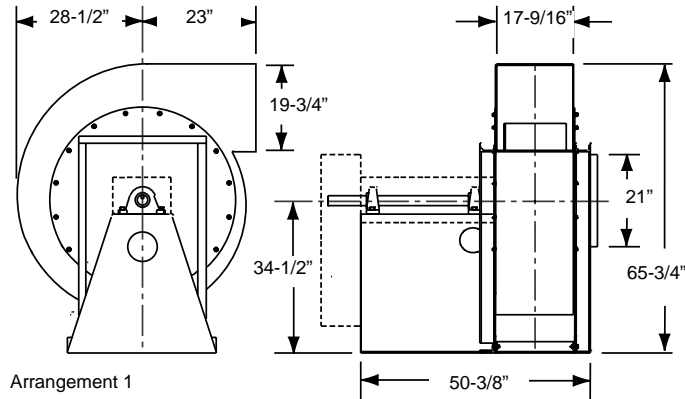
Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream. AMCA certification does not apply to MHR fans.

# Data MH/MHR 210



**Wheel Diameter** - 36-1/2 in.  
**Wheel Type** - Radial Blade  
**Tip Speed FPM** - 9.56 x RPM  
**Typical BHP** = 14.8 (RPM/1000)<sup>3</sup>  
**Inlet Area** = 2.32 sq. ft. inside area

**Outlet Area** = 2.41 sq. ft. inside area  
**Outlet Velocity (FPM)** = CFM/2.41  
**Max. Motor Frame** - 326T (Arr. 9 & 10)  
**Approx. Ship Wt.** - 1372 lbs. (MH-SD Arr. 1)



Maximum Speeds	
Standard Duty	1256
Heavy Duty	2093

## 210 MH/MHR

CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2500	1037	380	.68																
5000	2074	457	1.81	571	2.94	671	4.18	760	5.45										
7500	3112	567	4.05	664	5.68	746	7.37	821	9.04	892	10.9	959	12.7	1022	14.6	1082	16.4	1140	18.4
10000	4149	691	7.97	774	10.1	848	12.2	915	14.5	976	16.8	1033	18.9	1089	21.2	1142	23.5	1195	26.0
12500	5186	826	14.1	893	16.7	959	19.3	1021	21.9	1078	24.8	1131	27.7	1181	30.5	1229	33.3	1275	36.0
15000	6224	969	23.2	1022	26.1	1079	29.3	1134	32.4	1187	35.5	1237	38.7	1284	42.1	1329	45.6	1372	49.0
17500	7261	1114	35.7	1159	39.0	1206	42.4	1254	46.1	1302	49.8	1349	53.5	1393	57.0	1436	60.8	1477	64.7
20000	8298	1260	52.1	1300	55.8	1341	59.7	1382	63.7	1424	67.9	1467	72.2	1508	76.4	1548	80.4	1587	84.6
22500	9336	1410	73.3	1444	77.3	1480	81.6	1515	85.8	1552	90.4	1590	95.2	1628	100	1665	105	1701	109
25000	10373	1560	99.6	1591	104	1622	109	1653	113	1686	118	1719	123	1753	128	1787	134	1820	139
27500	11410	1708	131	1737	136	1766	141	1794	146	1823	152	1852	157	1883	163	1913	168	1944	174
30000	12448	1857	169	1885	175	1912	180	1938	186	1964	191	1990	197	2017	203	2045	209	2073	215
32500	13485	2007	214	2035	221	2059	226	2081	232										

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7500	3112	1194	20.4																
10000	4149	1245	28.4	1295	31.0	1342	33.5	1389	36.0	1433	38.4	1477	41.0	1520	43.6	1561	46.2		
12500	5186	1319	38.7	1364	41.6	1407	44.5	1449	47.5	1491	50.6	1532	53.7	1572	56.8	1611	59.9	1650	63.1
15000	6224	1414	52.5	1454	55.8	1493	59.1	1531	62.3	1568	65.5	1605	68.9	1642	72.4	1678	75.9	1714	79.5
17500	7261	1516	68.7	1555	72.9	1592	76.9	1628	81.0	1663	84.9	1697	88.7	1731	92.6	1764	96.4	1796	100
20000	8298	1624	88.7	1661	93.2	1696	97.6	1731	102	1765	107	1797	112	1829	116	1861	121	1892	125
22500	9336	1737	114	1772	119	1805	123	1838	128	1871	133	1903	138	1933	143	1964	149	1993	154
25000	10373	1854	144	1887	150	1919	155	1950	160	1981	165	2012	170	2041	175	2071	181		
27500	11410	1975	180	2006	186	2036	191	2066	197										

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
12500	5186	1687	66.2	1724	69.3	1761	72.5	1796	75.5	1831	78.7	1866	81.9	1900	85.1	1933	88.4	1966	91.7
15000	6224	1749	83.1	1783	86.7	1818	90.5	1851	94.1	1885	98.0	1918	102	1950	106	1982	109	2013	113
17500	7261	1828	104	1860	108	1891	112	1923	116	1953	120	1984	124	2014	128	2044	132	2074	137
20000	8298	1922	130	1951	134	1981	139	2010	143	2038	147	2066	151						
22500	9336	2023	159	2051	164	2079	169												

Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream. AMCA certification does not apply to MHR fans.

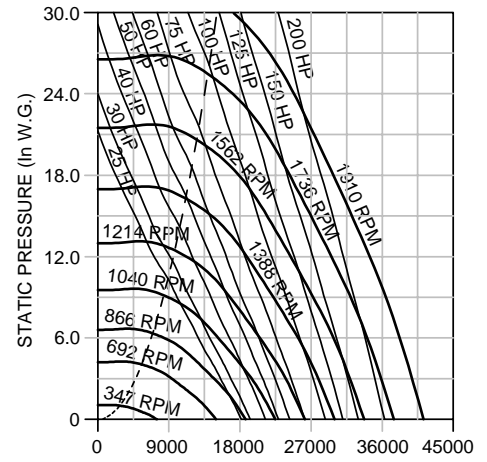
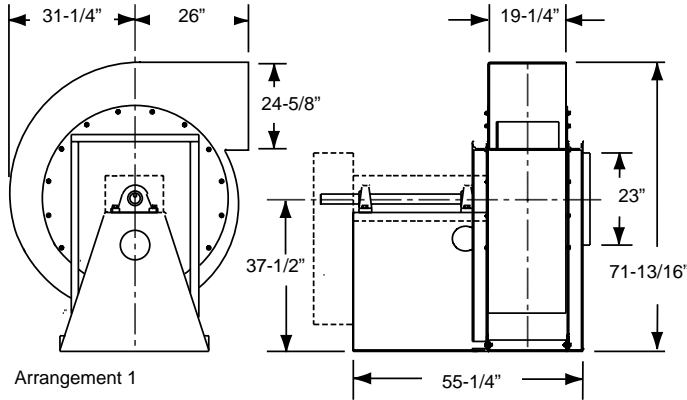
# 230 MH/MHR Data

**Wheel Diameter** - 40 in.  
**Wheel Type** - Radial Blade  
**Tip Speed FPM** - 10.47 x RPM  
**Typical BHP** = 23.3 (RPM/1000)<sup>3</sup>  
**Inlet Area** = 2.80 sq. ft. inside area

**Outlet Area** = 2.89 sq. ft. inside area  
**Outlet Velocity (FPM)** = CFM/2.89  
**Max. Motor Frame** - 326T (Arr. 9 & 10)  
**Approx. Ship Wt.** - 1645 lbs. (MH-SD Arr. 1)

## Maximum Speeds

Standard Duty
1146
Heavy Duty
1910



## 230 MH/MHR

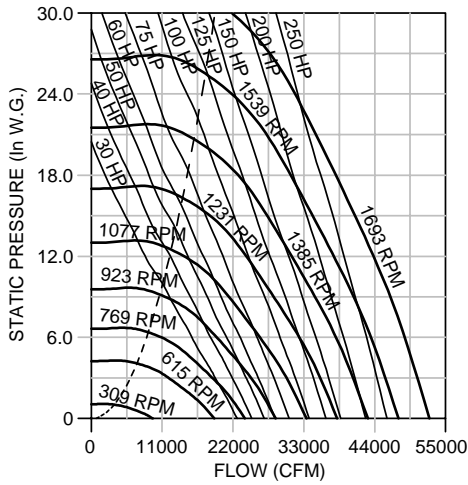
CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3000	1034	347	.82																
6000	2068	417	2.17	521	3.52	613	5.03	694	6.54										
9000	3103	517	4.84	606	6.82	681	8.84	749	10.8	814	13.0	875	15.2	933	17.5	988	19.7	1041	22.1
12000	4137	630	9.53	706	12.0	774	14.6	835	17.4	890	20.1	943	22.7	994	25.4	1043	28.2	1091	31.2
15000	5172	754	16.9	815	20.0	875	23.1	931	26.2	983	29.6	1032	33.2	1078	36.6	1121	39.8	1163	43.1
18000	6206	884	27.8	933	31.3	984	35.0	1035	38.8	1083	42.5	1128	46.3	1171	50.4	1213	54.7	1252	58.8
21000	7241	1016	42.7	1057	46.6	1100	50.8	1144	55.2	1188	59.6	1231	64.1	1271	68.3	1310	72.8	1348	77.6
24000	8275	1149	62.3	1185	66.7	1223	71.5	1261	76.4	1299	81.3	1338	86.5	1375	91.3	1412	96.3	1448	101
27000	9310	1286	87.8	1317	92.5	1350	97.7	1382	103	1416	108	1450	114	1485	120	1519	125	1552	131
30000	10344	1422	119	1450	124	1479	130	1507	135	1537	141	1568	148	1599	154	1630	160	1661	167
33000	11379	1557	157	1584	163	1610	169	1636	175	1663	181	1690	188	1717	194	1745	201	1773	208
36000	12413	1693	202	1719	209	1743	216	1767	222	1791	229	1815	236	1840	243	1865	250	1891	258
39000	13448	1830	256	1856	264	1877	271	1898	277										

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9000	3103	1091	24.5																
12000	4137	1137	34.1	1182	37.2	1226	40.2	1268	43.2	1309	46.2	1349	49.2	1388	52.3	1425	55.4		
15000	5172	1204	46.4	1245	49.9	1284	53.3	1323	57.0	1361	60.6	1398	64.3	1435	68.1	1471	71.9	1506	75.6
18000	6206	1290	62.9	1327	66.9	1362	70.7	1397	74.6	1432	78.7	1465	82.6	1499	86.8	1532	91.0	1564	95.2
21000	7241	1384	82.4	1419	87.3	1452	92.1	1485	96.9	1517	102	1549	106	1580	111	1610	116	1639	120
24000	8275	1482	106	1515	112	1548	117	1579	123	1610	128	1640	134	1670	140	1698	145	1726	150
27000	9310	1585	137	1616	142	1647	148	1677	153	1707	159	1736	166	1764	172	1792	178	1819	184
30000	10344	1691	173	1721	179	1751	185	1779	191	1808	197	1835	204	1862	210	1889	217		
33000	11379	1802	215	1830	222	1858	229	1885	236										

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
15000	5172	1540	79.3	1574	83.1	1608	87.0	1640	90.6	1672	94.4	1704	98.3	1734	102	1765	106	1795	110
18000	6206	1596	99.5	1628	104	1659	108	1690	113	1721	118	1751	122	1780	127	1810	131	1838	136
21000	7241	1669	125	1698	129	1726	134	1755	139	1783	144	1811	149	1839	154	1866	159	1893	164
24000	8275	1754	156	1781	161	1808	166	1834	171	1860	176	1886	182						
27000	9310	1846	191	1872	197	1898	203												

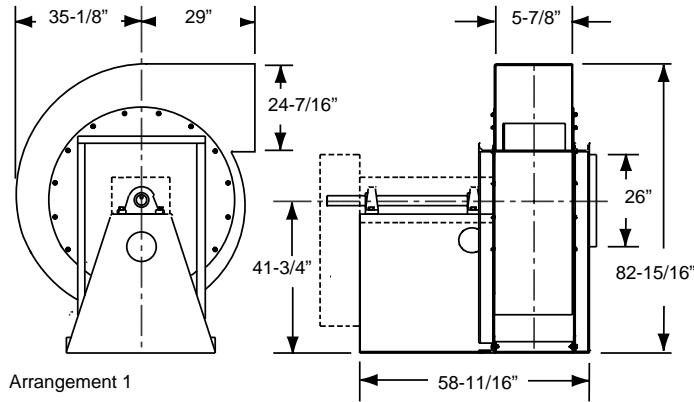
Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream. AMCA certification does not apply to MHR fans.

# Data MH/MHR 260



**Wheel Diameter** - 45-1/8 in.  
**Wheel Type** - Radial Blade  
**Tip Speed FPM** - 11.81 x RPM  
**Typical BHP** = 43.1 (RPM/1000)<sup>3</sup>  
**Inlet Area** = 3.59 sq. ft. inside area

**Outlet Area** = 3.69 sq. ft. inside area  
**Outlet Velocity (FPM)** = CFM/3.69  
**Max. Motor Frame** - 326T (Arr. 9 & 10)  
**Approx. Ship Wt.** - 2107 lbs. (MH-SD Arr. 1)



Maximum Speeds	
Standard Duty	1016
Heavy Duty	1693

## 260 MH/MHR

CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4000	1084	309	1.09																
8000	2168	378	3.01	468	4.8	547	6.76	618	8.76										
12000	3252	472	6.85	549	9.43	615	12.2	674	14.8	729	17.6	783	20.6	833	23.6	881	26.5	927	29.5
16000	4336	579	13.7	644	17.0	702	20.3	755	24.0	804	27.7	850	31.2	893	34.7	936	38.4	977	42.2
20000	5420	695	24.4	746	28.4	798	32.7	847	36.8	892	41.2	934	45.8	974	50.4	1012	54.9	1049	59.4
24000	6504	816	40.2	858	44.9	901	49.8	944	54.8	986	59.8	1025	64.7	1063	70.1	1099	75.6	1133	81.1
28000	7588	940	62.1	975	67.3	1011	72.8	1048	78.6	1085	84.5	1122	90.4	1157	96.1	1191	102	1223	108
32000	8672	1064	90.7	1096	96.9	1126	103	1157	109	1190	116	1223	123	1255	129	1287	136	1318	143
36000	9756	1192	128	1217	134	1245	141	1273	148	1300	155	1330	163	1359	170	1388	178	1416	185
40000	10840	1318	174	1342	181	1367	188	1391	196	1416	203	1441	211	1467	220	1493	228	1519	236
44000	11924	1443	229	1465	237	1488	245	1511	253	1533	261	1556	270	1579	279	1602	288	1626	297
48000	13008	1570	296	1593	305	1613	314	1633	322	1652	330	1674	340						

CFM	OV	10" SP		11" SP		12" SP		13"0 SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
12000	3252	971	32.6																
16000	4336	1017	46.1	1056	50.0	1094	54.0	1131	58.1	1167	62.1	1202	66.0	1236	70.0	1270	74.3	1302	78.3
20000	5420	1084	63.6	1119	68.1	1153	72.6	1186	77.2	1219	82.0	1252	87.0	1283	91.8	1315	97.0	1345	102
24000	6504	1166	86.7	1199	92.3	1230	97.6	1260	103	1289	108	1318	113	1347	118	1376	124	1404	130
28000	7588	1255	114	1285	121	1315	127	1344	134	1372	140	1399	147	1426	153	1452	159	1477	165
32000	8672	1348	149	1377	156	1405	163	1432	170	1459	177	1485	185	1511	192	1536	200	1561	207
36000	9756	1445	193	1472	200	1499	207	1525	215	1551	223	1576	231	1601	239	1624	247	1648	255
40000	10840	1545	245	1571	253	1596	261	1621	270	1646	278	1670	286	1693	294				
44000	11924	1650	306	1673	315														

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
16000	4336	1334	82.6																
20000	5420	1376	107	1405	112	1434	117	1463	122	1491	127	1518	132	1545	137	1572	142	1598	147
24000	6504	1431	135	1459	141	1486	147	1512	152	1539	159	1565	165	1591	171	1616	176	1642	183
28000	7588	1503	171	1528	177	1552	183	1577	190	1601	196	1626	203	1649	209	1673	215		
32000	8672	1585	215	1608	222	1632	229	1654	236	1677	243								
36000	9756	1672	264																

Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream. AMCA certification does not apply to MHR fans.



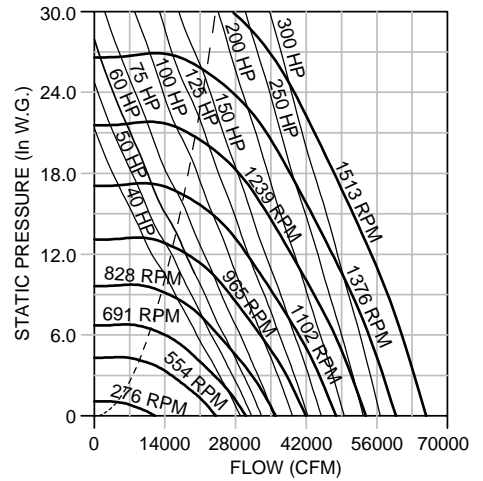
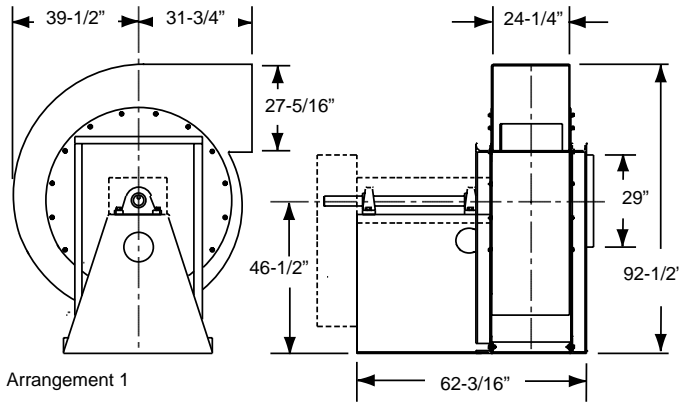
# 290 MH/MHR Data

**Wheel Diameter** - 50-1/2 in.  
**Wheel Type** - Radial Blade  
**Tip Speed FPM** - 13.22 x RPM  
**Typical BHP** = 74.4 (RPM/1000)<sup>3</sup>  
**Inlet Area** = 4.47 sq. ft. inside area

**Outlet Area** = 4.60 sq. ft. inside area  
**Outlet Velocity (FPM)** = CFM/4.60  
**Max. Motor Frame** - 326T (Arr. 9 & 10)  
**Approx. Ship Wt.** - 2630 lbs. (MH-SD Arr. 1)

## Maximum Speeds

Standard Duty
908
Heavy Duty
1513



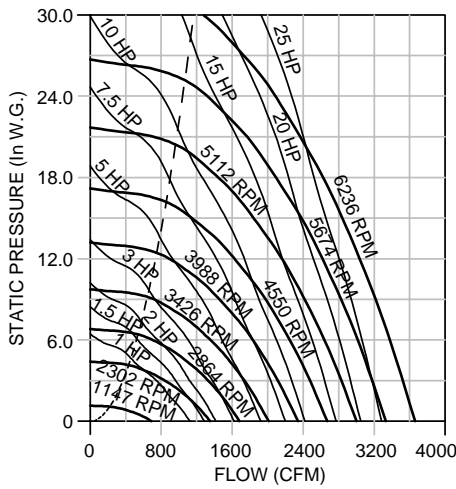
## 290 MH/MHR

CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5000	1082	276	1.37																
10000	2164	337	3.74	418	5.99	489	8.46	552	10.9										
15000	3246	421	8.53	491	11.8	549	15.2	602	18.5	651	21.9	699	25.7	744	29.4	787	33.1	829	37.0
20000	4329	516	17.0	574	21.1	627	25.4	675	30.1	718	34.6	759	39.0	798	43.4	836	47.9	873	52.7
25000	5411	620	30.4	666	35.5	712	40.7	756	45.9	796	51.3	834	57.2	870	63.0	904	68.6	937	74.2
30000	6493	728	50.1	765	55.8	804	62.1	843	68.5	880	74.6	915	80.7	949	87.4	981	94.3	1012	101
35000	7575	839	77.5	870	83.9	902	90.7	935	97.9	969	106	1001	113	1033	120	1063	127	1092	135
40000	8658	949	113	977	120	1005	128	1033	136	1062	144	1092	153	1120	161	1149	170	1176	178
45000	9740	1063	159	1086	167	1111	176	1135	184	1160	193	1186	202	1213	212	1238	221	1264	231
50000	10822	1175	216	1197	225	1219	234	1241	244	1263	253	1286	263	1309	274	1332	284	1355	294
55000	11904	1287	285	1307	295	1327	305	1348	316	1368	326	1388	336	1409	348	1430	359	1451	370
60000	12987	1400	368	1421	380	1439	391	1457	402	1474	412	1493	424	1512	435				

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
15000	3246	868	40.8	905	44.8														
20000	4329	909	57.6	944	62.6	978	67.7	1011	72.7	1043	77.6	1074	82.5	1105	87.7	1134	92.6	1163	97.8
25000	5411	968	79.4	999	84.9	1030	90.7	1060	96.6	1089	103	1118	109	1147	115	1174	121	1202	127
30000	6493	1042	108	1070	115	1098	122	1125	128	1151	135	1177	141	1203	148	1229	155	1254	162
35000	7575	1120	143	1147	151	1174	159	1200	167	1225	175	1249	183	1273	191	1296	198	1319	206
40000	8658	1203	186	1229	194	1254	203	1279	212	1303	222	1326	231	1349	240	1372	250	1394	259
45000	9740	1289	240	1314	249	1338	259	1361	268	1384	277	1407	288	1429	298	1450	308	1472	319
50000	10822	1379	305	1402	316	1425	326	1447	336	1469	346	1490	356	1512	367				
55000	11904	1472	382	1493	393														

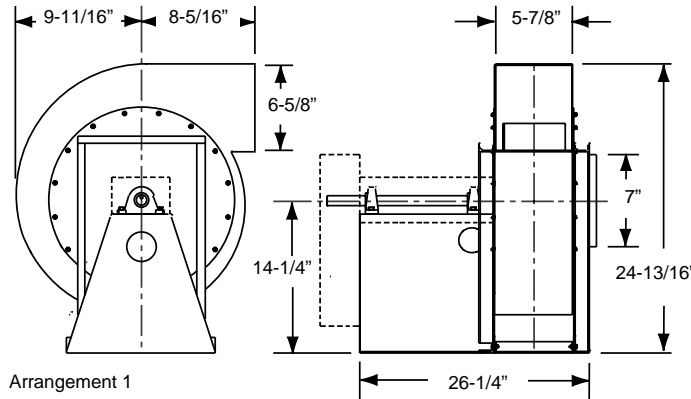
CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20000	4329	1192	103																
25000	5411	1229	134	1255	140	1281	146	1307	152	1332	159	1357	165	1381	171	1405	178	1428	184
30000	6493	1279	169	1303	176	1327	183	1351	191	1375	198	1398	206	1421	213	1444	221	1467	228
35000	7575	1342	214	1364	221	1386	229	1409	237	1430	244	1452	253	1473	261	1495	269		
40000	8658	1415	268	1436	277	1457	286	1477	294	1498	303								
45000	9740	1492	329	1513	340														

Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream. AMCA certification does not apply to MHR fans.



**Wheel Diameter** - 12-1/4 in.  
**Wheel Type** - Radial Blade  
**Tip Speed FPM** = 3.21 x RPM  
**Typical BHP** = .079 (RPM/1000)<sup>3</sup>  
**Inlet Area** - .24 sq. ft. inside area

**Outlet Area** - .27 sq. ft. inside area  
**Outlet Velocity (FPM)** = CFM/.27  
**Max. Motor Frame** - 184T (Arr. 9 & 10)  
**Approx. Ship Wt.** - 247 lbs. (SD Arr. 1)



Maximum Speeds	
Standard Duty	3742
Heavy Duty	6236

## 70 MHB

CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
250	925	1147	.11																
500	1851	1344	.24	1716	.43	2026	.66	2293	.91	2536	1.16								
750	2777	1630	.51	1944	.75	2214	1.00	2459	1.30	2686	1.63	2893	1.97	3086	2.33	3267	2.70	3440	3.07
1000	3703	1973	.97	2228	1.29	2466	1.61	2687	1.92	2888	2.26	3077	2.63	3259	3.04	3433	3.46	3599	3.91
1250	4629	2347	1.70	2560	2.06	2761	2.47	2953	2.88	3139	3.27	3317	3.65	3483	4.06	3640	4.50	3791	4.96
1500	5555	2738	2.77	2916	3.17	3092	3.62	3261	4.11	3423	4.62	3581	5.10	3737	5.56	3887	6.01	4031	6.47
1750	6481	3140	4.23	3292	4.69	3444	5.17	3595	5.70	3741	6.27	3882	6.85	4020	7.44	4156	8.00	4290	8.54
2000	7407	3548	6.17	3679	6.67	3813	7.20	3946	7.77	4080	8.38	4209	9.01	4334	9.67	4457	10.3	4577	11.0
2250	8333	3959	8.63	4076	9.18	4194	9.77	4315	10.4	4433	11.0	4551	11.7	4668	12.4	4781	13.1	4891	13.9
2500	9259	4375	11.7	4482	12.3	4585	12.9	4694	13.6	4801	14.3	4908	15.0	5014	15.7	5119	16.5	5223	17.3
2750	10185	4795	15.4	4888	16.1	4984	16.8	5081	17.5	5179	18.2	5276	19.0	5373	19.8	5470	20.6	5567	21.4
3000	11111	5212	19.9	5301	20.6	5389	21.4	5476	22.1	5565	22.9	5654	23.7	5743	24.5	5831	25.4	5920	26.2
3250	12037	5626	25.1	5709	25.9	5791	26.7	5873	27.5	5956	28.4	6039	29.2	6122	30.1	6203	31.0		
3500	12962	6044	31.2	6128	32.1	6205	33.0												

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
750	2777	3606	3.45	3766	3.83														
1000	3703	3757	4.36	3908	4.83	4052	5.31	4191	5.80	4327	6.29	4458	6.79	4587	7.29	4712	7.79	4835	8.29
1250	4629	3938	5.45	4082	5.96	4222	6.49	4358	7.03	4490	7.59	4618	8.16	4742	8.74	4862	9.33	4979	9.92
1500	5555	4168	6.96	4301	7.49	4429	8.03	4554	8.60	4677	9.18	4798	9.79	4917	10.4	5035	11.0	5149	11.7
1750	6481	4421	9.07	4549	9.60	4673	10.1	4792	10.7	4908	11.3	5020	11.9	5131	12.5	5239	13.2	5346	13.9
2000	7407	4696	11.7	4815	12.3	4931	12.9	5046	13.5	5158	14.1	5267	14.7	5375	15.3	5479	16.0	5580	16.7
2250	8333	5000	14.6	5108	15.4	5214	16.1	5320	16.9	5425	17.6	5528	18.2	5630	18.9	5732	19.6	5831	20.3
2500	9259	5324	18.1	5423	18.9	5522	19.8	5619	20.6	5715	21.5	5811	22.3	5906	23.1	6000	23.9	6094	24.6
2750	10185	5661	22.2	5755	23.1	5848	24.0	5939	24.9	6028	25.8	6117	26.8	6204	27.7				
3000	11111	6010	27.1	6099	28.0	6185	29.0												

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1000	3703	4955	8.79	5073	9.29														
1250	4629	5094	10.5	5205	11.1	5315	11.8	5421	12.4	5527	13.0	5631	13.6	5733	14.2	5834	14.9	5933	15.5
1500	5555	5261	12.3	5371	13.0	5479	13.7	5583	14.4	5686	15.1	5787	15.8	5886	16.5	5983	17.2	6078	17.9
1750	6481	5450	14.5	5555	15.2	5658	16.0	5759	16.7	5860	17.4	5958	18.2	6056	18.9	6151	19.7		
2000	7407	5680	17.4	5777	18.1	5874	18.8	5968	19.5	6062	20.3	6155	21.1						
2250	8333	5927	21.0	6023	21.7	6116	22.4	6207	23.1										
2500	9259	6187	25.4																

Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

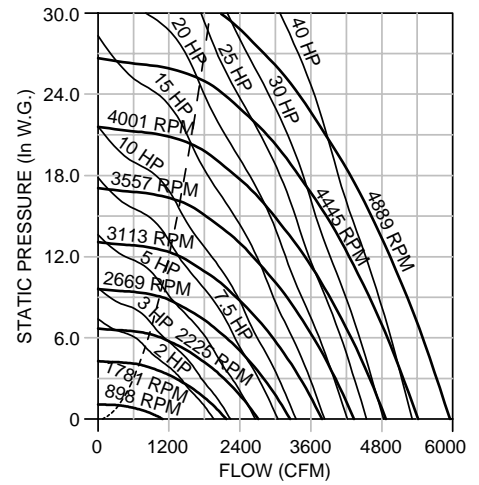
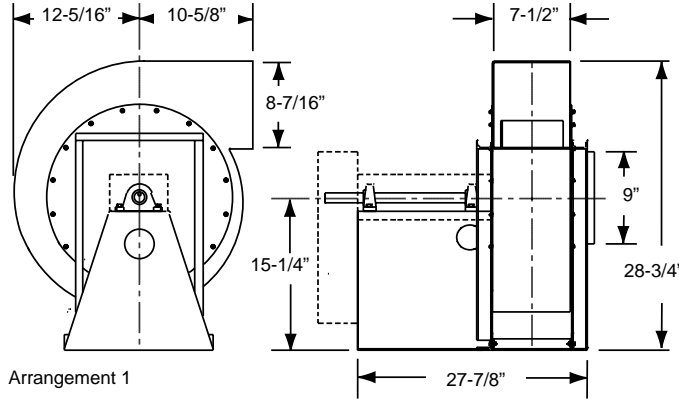
# 90 MHB Data

Wheel Diameter - 15-5/8 in.  
 Wheel Type - Radial Blade  
 Tip Speed FPM = 4.09 x RPM  
 Typical BHP = 0.28 (RPM/1000)<sup>3</sup>  
 Inlet Area - .41 sq. ft. inside area

Outlet Area - .44 sq. ft. inside area  
 Outlet Velocity (FPM) = CFM/.44  
 Max. Motor Frame - 184T (Arr. 9 & 10)  
 Approx. Ship Wt. - 330 lbs. (SD Arr. 1)

## Maximum Speeds

Standard Duty
2934
Heavy Duty
4889



## 90 MHB

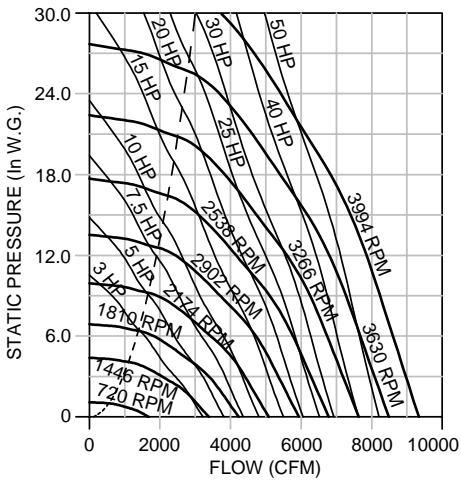
CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
400	909	898	.18																
800	1818	1047	.38	1342	.69	1585	1.07	1795	1.46										
1200	2727	1266	.81	1514	1.19	1728	1.60	1921	2.08	2100	2.61	2263	3.16	2414	3.74	2557	4.34	2693	4.93
1600	3636	1529	1.52	1731	2.04	1920	2.54	2094	3.03	2253	3.59	2402	4.20	2546	4.86	2683	5.54	2814	6.26
2000	4545	1816	2.65	1984	3.23	2145	3.89	2297	4.55	2445	5.15	2584	5.76	2715	6.43	2839	7.15	2959	7.91
2400	5454	2116	4.30	2258	4.95	2398	5.67	2532	6.47	2661	7.27	2787	8.04	2910	8.76	3028	9.48	3141	10.2
2800	6363	2426	6.58	2547	7.30	2668	8.09	2788	8.94	2904	9.85	3016	10.8	3125	11.7	3233	12.6	3340	13.5
3200	7272	2739	9.56	2845	10.4	2952	11.2	3058	12.1	3163	13.1	3265	14.1	3365	15.2	3462	16.3	3558	17.3
3600	8181	3057	13.4	3151	14.3	3244	15.2	3340	16.2	3434	17.2	3528	18.3	3620	19.4	3710	20.6	3798	21.8
4000	9090	3376	18.1	3462	19.1	3545	20.1	3631	21.2	3716	22.3	3800	23.4	3885	24.6	3969	25.8	4051	27.1
4400	10000	3700	23.9	3773	24.9	3852	26.1	3929	27.2	4007	28.4	4084	29.6	4161	30.9	4239	32.2	4315	33.5
4800	10909	4022	30.8	4093	32.0	4163	33.2	4232	34.4	4303	35.7	4374	36.9	4445	38.3	4516	39.6	4587	41.0
5200	11818	4342	38.9	4408	40.2	4474	41.5	4538	42.8	4603	44.1	4669	45.5	4736	46.9	4802	48.3	4866	49.8
5600	12727	4663	48.3	4728	49.7	4791	51.2	4852	52.6										

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	2727	2823	5.53	2949	6.14														
1600	3636	2938	7.00	3056	7.75	3170	8.53	3279	9.30	3386	10.1	3489	10.9	3590	11.7	3689	12.5	3785	13.3
2000	4545	3075	8.70	3189	9.53	3300	10.4	3407	11.3	3511	12.2	3611	13.1	3708	14.0	3803	15.0	3894	15.9
2400	5454	3249	11.0	3354	11.9	3455	12.8	3555	13.7	3652	14.7	3748	15.6	3842	16.6	3934	17.7	4025	18.7
2800	6363	3443	14.3	3544	15.2	3641	16.0	3735	16.9	3826	17.9	3915	18.9	4002	19.9	4088	21.0	4173	22.1
3200	7272	3653	18.4	3747	19.4	3839	20.3	3930	21.3	4018	22.3	4105	23.3	4188	24.3	4270	25.3	4350	26.4
3600	8181	3884	23.0	3970	24.2	4054	25.4	4138	26.6	4222	27.7	4304	28.8	4385	29.8	4464	30.9	4542	32.0
4000	9090	4132	28.4	4211	29.8	4289	31.1	4366	32.5	4443	33.8	4519	35.1	4594	36.4	4670	37.6	4744	38.8
4400	10000	4391	34.9	4464	36.2	4538	37.7	4610	39.2	4681	40.7	4752	42.2	4822	43.6				
4800	10909	4656	42.4	4727	43.9	4797	45.4	4864	46.9										

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1600	3636	3881	14.1																
2000	4545	3984	16.9	4072	17.9	4158	18.9	4243	19.9	4326	20.8	4407	21.8	4488	22.8	4567	23.8	4645	24.8
2400	5454	4113	19.8	4199	20.8	4284	22.0	4366	23.1	4447	24.2	4526	25.3	4603	26.5	4679	27.6	4754	28.8
2800	6363	4256	23.2	4338	24.3	4420	25.5	4500	26.7	4579	27.9	4657	29.1	4733	30.3	4809	31.6	4883	32.8
3200	7272	4429	27.5	4506	28.7	4582	29.9	4657	31.1	4731	32.3	4804	33.6	4878	34.9				
3600	8181	4619	33.1	4693	34.2	4767	35.4	4839	36.7										
4000	9090	4817	40.0																

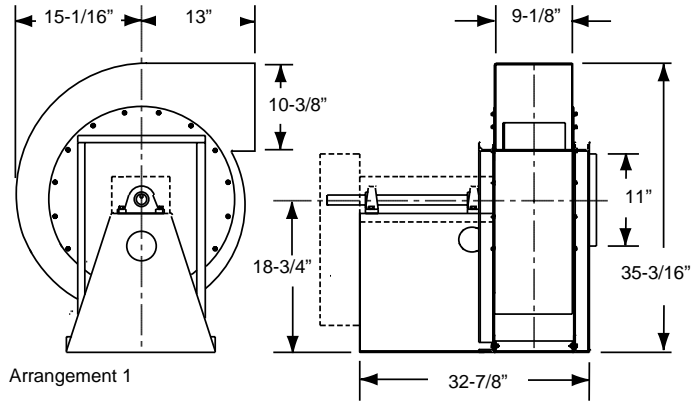
Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

# Data MHB 110



Wheel Diameter - 19-1/8 in.  
 Wheel Type - Radial Blade  
 Tip Speed (FPM) = 5.01 x RPM  
 Typical BHP = .68 (RPM/1000)<sup>3</sup>  
 Inlet Area - .62 sq. ft. inside area

Outlet Area - .66 sq. ft. inside area  
 Outlet Velocity (FPM) = CFM/.66  
 Max. Motor Frame - 215T (Arr. 9 & 10)  
 Approx. Ship Wt. - 439 lbs. (SD Arr. 1)



Maximum Speeds	
Standard Duty	2397
Heavy Duty	3994

## 110 MHB

CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
600	909	720	.19																
1200	1818	837	.45	1072	.79	1266	1.14	1439	1.54										
1800	2727	996	.91	1209	1.40	1384	1.92	1537	2.41	1677	2.92	1807	3.44	1929	3.99	2046	4.58	2159	5.22
2400	3636	1201	1.74	1365	2.28	1529	2.94	1674	3.63	1804	4.31	1924	4.98	2037	5.64	2144	6.3	2247	6.98
3000	4545	1429	3.07	1557	3.66	1690	4.36	1823	5.15	1950	6.01	2066	6.88	2172	7.73	2273	8.58	2370	9.42
3600	5454	1666	4.99	1775	5.69	1881	6.42	1992	7.24	2104	8.16	2214	9.14	2320	10.2	2419	11.2	2512	12.3
4200	6363	1907	7.60	2005	8.45	2096	9.27	2187	10.1	2281	11.1	2377	12.1	2473	13.2	2568	14.3	2659	15.5
4800	7272	2151	11.0	2240	12.0	2322	13.0	2402	13.9	2482	14.9	2563	15.9	2646	17.0	2730	18.2	2815	19.5
5400	8181	2399	15.4	2479	16.5	2554	17.6	2627	18.7	2698	19.8	2768	20.8	2841	22.0	2913	23.2	2988	24.4
6000	9090	2647	20.9	2722	22.1	2791	23.3	2858	24.5	2923	25.7	2986	26.9	3050	28.1	3114	29.3	3179	30.6
6600	9999	2901	27.5	2964	28.8	3031	30.2	3094	31.6	3154	32.9	3212	34.1	3270	35.4	3328	36.8	3385	38.1
7200	10909	3152	35.4	3214	37.0	3273	38.4	3332	39.9	3389	41.3	3443	42.7	3496	44.1	3550	45.5	3603	47.0
7800	11818	3402	44.7	3460	46.4	3516	48.0	3571	49.6	3624	51.1	3677	52.7	3728	54.3	3778	55.8	3827	57.3
8400	12727	3651	55.4	3708	57.3	3762	59.1	3815	60.9	3865	62.6	3913	64.2	3962	65.9				
9000	13636	3903	67.9	3962	70.1														

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1800	2727	2267	5.88																
2400	3636	2345	7.67	2440	8.39	2532	9.13	2622	9.90	2709	10.7	2795	11.5	2879	12.4	2961	13.2		
3000	4545	2462	10.2	2552	11.1	2638	11.9	2722	12.7	2804	13.6	2883	14.4	2960	15.3	3036	16.2	3110	17.1
3600	5454	2600	13.3	2685	14.3	2767	15.3	2847	16.3	2924	17.3	3000	18.3	3074	19.3	3146	20.3	3216	21.3
4200	6363	2747	16.7	2831	17.9	2911	19.2	2988	20.4	3062	21.6	3134	22.7	3205	23.9	3274	25.1	3342	26.3
4800	7272	2898	20.8	2979	22.1	3058	23.5	3135	24.9	3209	26.3	3280	27.7	3349	29.0	3416	30.4	3481	31.8
5400	8181	3062	25.8	3137	27.2	3211	28.6	3285	30.1	3357	31.6	3428	33.2	3496	34.7	3563	36.3	3628	37.9
6000	9090	3245	31.9	3312	33.4	3379	34.8	3447	36.4	3514	37.9	3580	39.5	3647	41.2	3712	42.9	3776	44.6
6600	9999	3444	39.5	3504	40.9	3564	42.4	3624	43.9	3685	45.5	3746	47.1	3808	48.9	3869	50.6	3929	52.4
7200	10909	3656	48.4	3709	49.9	3763	51.4	3817	52.9	3872	54.5	3928	56.2	3984	57.9				
7800	11818	3876	58.9	3925	60.4	3973	61.9												

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3000	4545	3184	18.1	3255	19.0	3326	20.0	3395	21.0	3464	22.0	3531	23.1	3598	24.1	3664	25.2	3729	26.4
3600	5454	3286	22.3	3354	23.3	3420	24.3	3486	25.4	3550	26.4	3613	27.5	3676	28.6	3737	29.7	3799	30.8
4200	6363	3408	27.4	3473	28.6	3537	29.7	3600	30.9	3662	32.1	3722	33.2	3782	34.4	3841	35.6	3899	36.7
4800	7272	3545	33.1	3608	34.5	3669	35.8	3730	37.2	3789	38.5	3848	39.8	3905	41.1	3962	42.5		
5400	8181	3691	39.4	3752	40.9	3812	42.5	3871	44.0	3929	45.6	3986	47.1						
6000	9090	3839	46.4	3900	48.1	3960	49.8												
6600	9999	3990	54.2																

Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

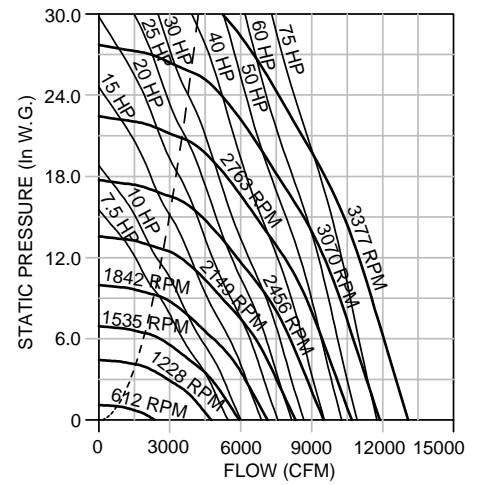
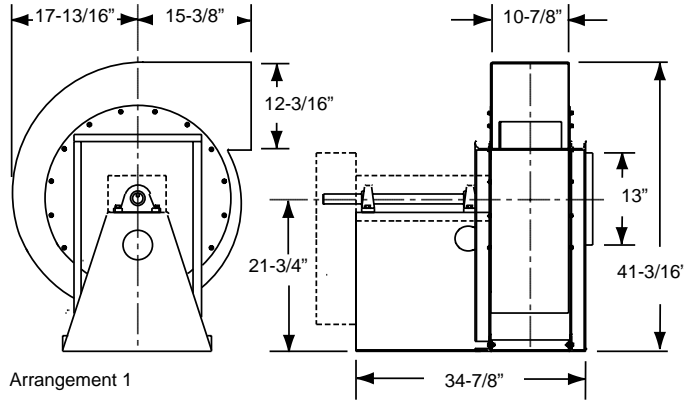
# 130 MHB Data

Wheel Diameter - 22-5/8 in.  
 Wheel Type - Radial Blade  
 Tip Speed (FPM) = 5.92 x RPM  
 Typical BHP = 1.56 (RPM/1000)<sup>3</sup>  
 Inlet Area - .87 sq. ft. inside area

Outlet Area - .92 sq. ft. inside area  
 Outlet Velocity (FPM) = CFM/.92  
 Max. Motor Frame - 215T (Arr. 9 & 10)  
 Approx. Ship Wt. - 581 lbs. (SD Arr. 1)

## Maximum Speeds

Standard Duty
2026
Heavy Duty
3377



## 130 MHB

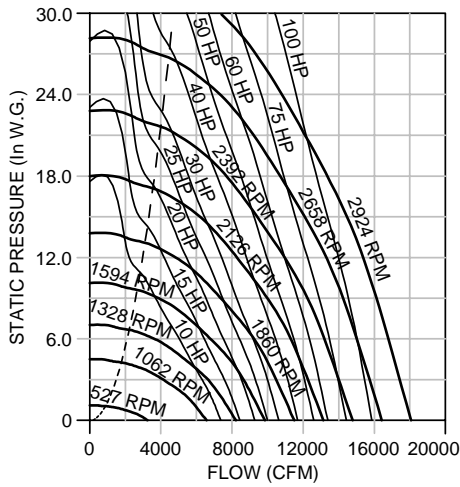
CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
900	967	612	.29																
1800	1935	726	.71	921	1.21	1082	1.72	1224	2.29	1356	2.93								
2700	2903	876	1.46	1049	2.18	1195	2.96	1322	3.71	1438	4.45	1546	5.22	1647	6.01	1744	6.84	1837	7.73
3600	3870	1069	2.89	1197	3.66	1329	4.60	1451	5.64	1560	6.68	1659	7.69	1753	8.69	1842	9.68	1927	10.7
4500	4838	1280	5.16	1381	6.04	1484	7.02	1590	8.15	1693	9.39	1791	10.7	1881	12.0	1965	13.3	2045	14.5
5400	5806	1495	8.42	1583	9.49	1667	10.6	1752	11.7	1840	13.0	1929	14.4	2015	15.9	2098	17.5	2177	19.0
6300	6774	1715	12.9	1794	14.2	1867	15.4	1939	16.7	2011	18.0	2086	19.4	2162	21.0	2238	22.6	2312	24.3
7200	7741	1939	18.8	2010	20.3	2076	21.7	2139	23.1	2201	24.5	2264	26.0	2329	27.6	2395	29.3	2461	31.0
8100	8709	2162	26.3	2228	28.0	2289	29.7	2346	31.2	2403	32.8	2459	34.5	2514	36.1	2571	37.8	2629	39.6
9000	9677	2392	35.7	2448	37.5	2505	39.4	2559	41.2	2610	43.0	2661	44.7	2711	46.5	2761	48.3	2812	50.2
9900	10645	2620	47.1	2672	49.1	2723	51.2	2773	53.2	2822	55.2	2869	57.1	2915	59.0	2961	61.0	3007	63.0
10800	11612	2846	60.6	2896	62.9	2944	65.2	2991	67.4	3036	69.6	3081	71.8	3124	73.9	3166	75.9	3208	78.1
11700	12580	3072	76.5	3120	79.1	3166	81.6	3211	84.1	3254	86.5	3295	88.8	3336	91.1	3376	93.4		
12600	13548	3300	95.0	3350	98.1														

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2700	2903	1926	8.65	2013	9.64														
3600	3870	2008	11.7	2087	12.7	2163	13.8	2237	14.8	2310	16.0	2380	17.1	2449	18.3	2517	19.6	2583	20.8
4500	4838	2122	15.8	2196	17.1	2267	18.3	2337	19.5	2405	20.8	2470	22.0	2535	23.3	2597	24.6	2659	25.9
5400	5806	2251	20.6	2322	22.1	2390	23.7	2457	25.2	2521	26.7	2583	28.2	2644	29.7	2704	31.2	2763	32.7
6300	6774	2385	26.1	2455	27.9	2523	29.8	2588	31.6	2650	33.4	2711	35.2	2769	37.0	2827	38.8	2883	40.6
7200	7741	2527	32.9	2593	34.8	2658	36.8	2722	38.9	2784	40.9	2844	43.0	2902	45.1	2959	47.2	3014	49.3
8100	8709	2687	41.5	2746	43.4	2805	45.5	2864	47.6	2922	49.8	2980	52.0	3037	54.3	3092	56.6	3147	58.9
9000	9677	2863	52.1	2915	54.1	2967	56.1	3020	58.3	3073	60.5	3127	62.8	3179	65.2	3232	67.6	3284	70.1
9900	10645	3052	64.9	3098	67.0	3145	69.1	3192	71.3	3239	73.5	3287	75.8	3335	78.2				
10800	11612	3250	80.2	3292	82.4	3334	84.6	3376	86.8										

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3600	3870	2648	22.1	2712	23.4														
4500	4838	2719	27.2	2778	28.6	2837	30.0	2894	31.4	2950	32.8	3006	34.3	3061	35.8	3116	37.3	3169	38.8
5400	5806	2820	34.2	2877	35.7	2932	37.2	2986	38.7	3039	40.2	3092	41.7	3144	43.3	3195	44.9	3245	46.5
6300	6774	2938	42.3	2992	44.1	3045	45.8	3097	47.6	3148	49.3	3198	51.0	3248	52.7	3297	54.5	3345	56.2
7200	7741	3067	51.3	3119	53.4	3170	55.4	3221	57.5	3270	59.5	3318	61.5	3366	63.5				
8100	8709	3201	61.3	3252	63.6	3303	66.0	3353	68.3										
9000	9677	3335	72.5																

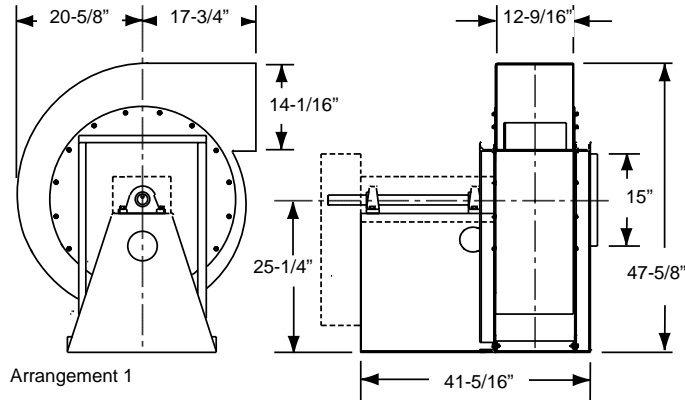
Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

# Data MHB 150



Wheel Diameter - 26-1/8 in.  
 Wheel Type - Radial Blade  
 Tip Speed (FPM) = 6.84 x RPM  
 Typical BHP = 3.07 (RPM/1000)<sup>3</sup>  
 Inlet Area - 1.17 sq. ft. inside area

Outlet Area - 1.23 sq. ft. inside area  
 Outlet Velocity (FPM) = CFM/1.23  
 Max. Motor Frame - 256T (Arr. 9 & 10)  
 Approx. Ship Wt. - 770 lbs. (SD Arr. 1)



Maximum Speeds	
Standard Duty	1755
Heavy Duty	2924

## 150 MHB

CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	967	527	.36																
2400	1935	615	.87	785	1.49	928	2.17	1054	2.87	1166	3.62	1268	4.42	1363	5.30				
3600	2903	739	1.88	889	2.73	1014	3.59	1126	4.54	1228	5.55	1324	6.57	1415	7.60	1500	8.63	1581	9.70
4800	3870	893	3.61	1012	4.71	1126	5.83	1229	6.96	1322	8.10	1409	9.31	1492	10.6	1570	11.9	1646	13.3
6000	4838	1066	6.42	1157	7.62	1253	9.01	1347	10.4	1435	11.9	1517	13.3	1594	14.7	1666	16.1	1736	17.6
7200	5806	1246	10.5	1321	11.8	1398	13.4	1478	15.0	1557	16.7	1634	18.4	1708	20.2	1777	21.8	1844	23.5
8400	6774	1430	16.2	1495	17.7	1559	19.3	1625	21.0	1693	23.0	1762	24.9	1830	27.0	1896	29.0	1960	31.0
9600	7741	1617	23.8	1674	25.3	1730	27.0	1787	28.9	1844	31.0	1903	33.1	1963	35.3	2024	37.6	2083	39.9
10800	8709	1803	33.3	1855	35.1	1907	37.0	1957	38.9	2007	41.1	2058	43.3	2109	45.6	2163	48.2	2216	50.6
12000	9677	1994	45.3	2041	47.3	2087	49.3	2132	51.3	2177	53.6	2222	55.9	2267	58.3	2314	61.0	2361	63.6
13200	10645	2185	59.9	2227	62.0	2268	64.1	2311	66.4	2352	68.7	2393	71.2	2433	73.7	2475	76.4	2516	79.1
14400	11612	2375	77.3	2415	79.6	2454	82.0	2492	84.3	2530	86.8	2568	89.4	2605	92.0	2642	94.7	2680	97.6
15600	12580	2564	97.7	2601	100	2638	103	2675	105	2711	108	2746	111	2780	113	2815	116	2849	119
16800	13548	2754	121	2793	125	2827	127	2860	130	2892	133								

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3600	2903	1657	10.8	1730	11.9	1801	13.1	1869	14.3	1934	15.5	1998	16.9	2060	18.2	2120	19.6		
4800	3870	1719	14.7	1789	16.0	1857	17.4	1922	18.8	1986	20.2	2048	21.6	2107	23.0	2165	24.4	2222	25.9
6000	4838	1804	19.2	1869	20.8	1932	22.5	1994	24.2	2054	25.9	2112	27.6	2169	29.3	2226	31.0	2281	32.7
7200	5806	1907	25.2	1969	26.9	2028	28.7	2086	30.5	2142	32.4	2197	34.3	2251	36.3	2304	38.3	2355	40.3
8400	6774	2021	32.9	2080	34.9	2137	36.8	2192	38.8	2246	40.8	2298	42.8	2349	44.9	2399	47.0	2448	49.1
9600	7741	2141	42.2	2198	44.5	2253	46.7	2306	49.0	2358	51.2	2409	53.5	2458	55.7	2506	57.9	2553	60.2
10800	8709	2270	53.2	2323	55.8	2375	58.4	2426	60.9	2477	63.6	2525	66.0	2573	68.6	2620	71.1	2666	73.6
12000	9677	2409	66.4	2457	69.2	2506	72.1	2554	75.0	2601	77.8	2648	80.7	2694	83.5	2739	86.3	2783	89.1
13200	10645	2559	82.1	2602	85.0	2646	88.1	2689	91.1	2733	94.2	2777	97.4	2821	101	2864	104	2906	107
14400	11612	2718	101	2756	104	2795	107	2835	110	2874	113	2915	117						
15600	12580	2884	122	2918	126														

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4800	3870	2277	27.4	2331	28.9	2384	30.5	2435	32.1	2486	33.7	2535	35.3	2585	37.1	2633	38.8	2680	40.6
6000	4838	2334	34.4	2387	36.1	2438	37.8	2489	39.6	2538	41.3	2587	43.1	2634	44.9	2681	46.7	2727	48.5
7200	5806	2406	42.3	2456	44.4	2505	46.4	2554	48.5	2601	50.5	2649	52.6	2695	54.6	2740	56.6	2785	58.7
8400	6774	2496	51.3	2544	53.6	2590	55.8	2636	58.1	2682	60.5	2726	62.8	2770	65.2	2813	67.6	2856	69.9
9600	7741	2600	62.6	2645	64.9	2689	67.2	2733	69.6	2776	72.0	2819	74.6	2861	77.1	2902	79.6		
10800	8709	2711	76.2	2754	78.6	2798	81.2	2840	83.8	2881	86.3	2923	88.9						
12000	9677	2827	92.0	2870	94.8	2911	97.5												

Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

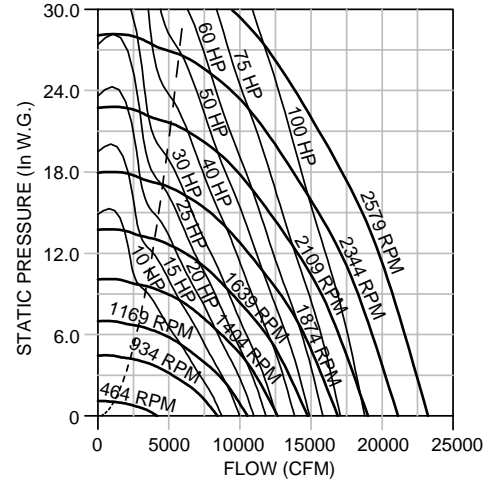
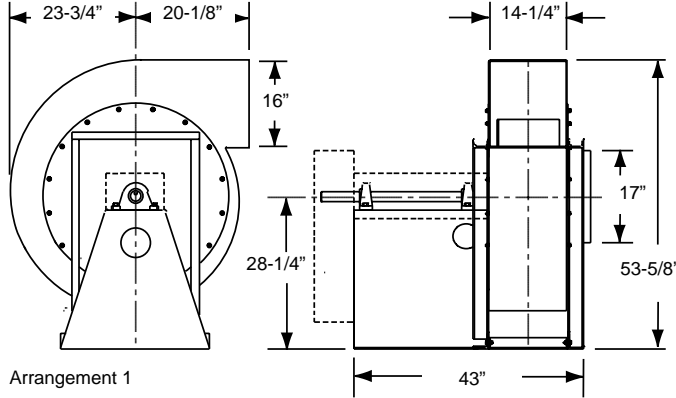
# 170 MHB Data

Wheel Diameter - 29-5/8 in.  
 Wheel Type - Radial Blade  
 Tip Speed (FPM) = 7.76 x RPM  
 Typical BHP = 5.75 (RPM/1000)<sup>3</sup>  
 Inlet Area - 1.51 sq. ft. inside area

Outlet Area - 1.58 sq. ft. inside area  
 Outlet Velocity (FPM) = CFM/1.58  
 Max. Motor Frame - 256T (Arr. 9 & 10)  
 Approx. Ship Wt. - 984 lbs. (SD Arr. 1)

## Maximum Speeds

Standard Duty
1547
Heavy Duty
2579



## 170 MHB

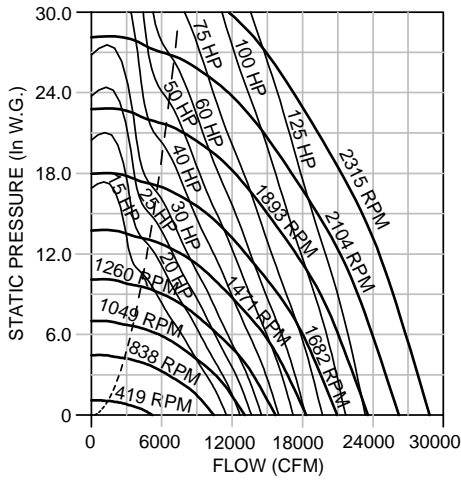
CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	943	464	.45																
3000	1886	537	1.07	689	1.86	816	2.71	927	3.59	1026	4.54	1117	5.58	1201	6.71				
4500	2830	642	2.28	776	3.34	887	4.42	987	5.64	1078	6.90	1164	8.19	1244	9.47	1319	10.8	1391	12.1
6000	3773	772	4.34	880	5.71	982	7.12	1073	8.52	1156	9.97	1234	11.5	1307	13.2	1378	14.9	1445	16.6
7500	4716	919	7.66	1001	9.16	1089	10.9	1173	12.7	1252	14.5	1324	16.2	1393	18.0	1458	19.9	1520	21.8
9000	5660	1072	12.5	1140	14.2	1210	16.1	1283	18.2	1355	20.3	1424	22.5	1489	24.6	1551	26.7	1610	28.8
10500	6603	1229	19.2	1288	21.0	1347	23.1	1407	25.4	1469	27.8	1532	30.3	1593	32.8	1652	35.3	1708	37.7
12000	7547	1388	28.1	1441	30.1	1492	32.3	1543	34.7	1596	37.3	1650	40.0	1705	42.8	1760	45.7	1813	48.5
13500	8490	1549	39.4	1596	41.6	1642	44.0	1688	46.5	1733	49.2	1780	52.1	1828	55.1	1876	58.2	1925	61.4
15000	9433	1711	53.5	1754	56.0	1795	58.4	1837	61.1	1878	64.0	1918	66.9	1960	70.1	2003	73.4	2046	76.8
16500	10377	1876	70.9	1913	73.4	1952	76.1	1990	79.0	2027	81.9	2064	85.0	2101	88.2	2138	91.6	2177	95.2
18000	11320	2039	91.4	2074	94.2	2110	97.2	2144	100	2179	103	2212	106	2246	110	2280	113	2315	117
19500	12264	2201	116	2234	119	2267	122	2299	125	2332	128	2364	132	2395	135	2427	139	2458	143
21000	13207	2363	143	2397	147	2428	151	2459	154	2488	157	2517	161	2547	165	2576	168		
22500	14150	2528	176	2561	180														

CFM	OV	10" SP		11" SP		12"0 SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4500	2830	1459	13.5	1523	14.9	1586	16.5	1646	18.0	1704	19.6	1761	21.3	1816	23.1				
6000	3773	1510	18.3	1572	20.0	1632	21.7	1691	23.4	1747	25.2	1802	27.0	1854	28.7	1906	30.6	1956	32.5
7500	4716	1580	23.8	1638	25.9	1694	27.9	1749	30.1	1803	32.2	1855	34.3	1906	36.5	1956	38.6	2005	40.7
9000	5660	1667	30.9	1721	33.1	1774	35.4	1826	37.7	1876	40.1	1925	42.6	1973	45.1	2020	47.6	2066	50.1
10500	6603	1763	40.2	1815	42.6	1866	45.1	1915	47.6	1963	50.1	2010	52.7	2055	55.3	2100	58.0	2143	60.7
12000	7547	1865	51.4	1915	54.2	1964	57.0	2012	59.8	2058	62.6	2103	65.4	2147	68.2	2190	71.1	2232	74.0
13500	8490	1973	64.6	2021	67.8	2068	71.1	2114	74.3	2158	77.4	2202	80.6	2244	83.7	2286	86.9	2327	90.1
15000	9433	2090	80.3	2134	83.8	2177	87.3	2221	91.0	2263	94.5	2305	98.1	2347	102	2387	105	2426	109
16500	10377	2215	98.8	2255	103	2295	107	2335	110	2375	114	2415	118	2454	122	2492	126	2530	130
18000	11320	2350	121	2385	125	2420	129	2456	133	2493	137	2530	141	2566	145				
19500	12264	2490	147	2522	151	2554	155												

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6000	3773	2005	34.4	2052	36.3	2099	38.3	2145	40.4	2190	42.5	2234	44.6	2277	46.8	2319	49.0	2361	51.3
7500	4716	2052	42.8	2099	45.0	2145	47.2	2189	49.4	2233	51.6	2276	53.9	2318	56.1	2359	58.4	2400	60.7
9000	5660	2112	52.7	2156	55.2	2200	57.8	2243	60.3	2286	62.9	2327	65.4	2368	68.0	2409	70.6	2449	73.2
10500	6603	2186	63.5	2229	66.4	2270	69.3	2311	72.2	2351	75.1	2391	78.1	2430	81.1	2469	84.1	2507	87.1
12000	7547	2273	76.9	2313	79.8	2353	82.9	2392	86.0	2430	89.0	2468	92.2	2506	95.5	2542	98.7	2579	102
13500	8490	2366	93.1	2405	96.3	2444	99.6	2481	103	2519	106	2555	109						
15000	9433	2465	112	2503	116	2540	119	2577	123										
16500	10377	2568	134																

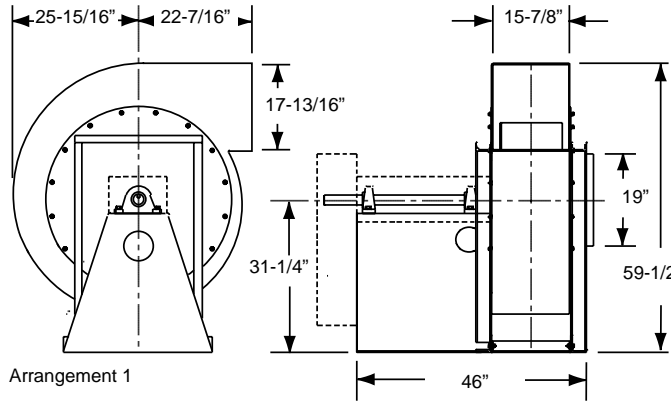
Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

# Data MHB 190



**Wheel Diameter** - 33 in.  
**Wheel Type** - Radial Blade  
**Tip Speed (FPM)** = 8.64 x RPM  
**Typical BHP** = 10.0 (RPM/1000)<sup>3</sup>  
**Inlet Area** - 1.90 sq. ft. inside area

**Outlet Area** - 1.96 sq. ft. inside area  
**Outlet Velocity (FPM)** = CFM/1.96  
**Max. Motor Frame** - 256T (Arr. 9 & 10)  
**Approx. Ship Wt.** - 1223 lbs. (SD Arr. 1)



Maximum Speeds	
Standard Duty	1389
Heavy Duty	2315

## 190 MHB

CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2000	1015	419	.60	576	1.27														
4000	2030	495	1.5	628	2.51	740	3.65	838	4.79	926	5.99	1007	7.29	1082	8.69	1152	10.2		
6000	3045	600	3.29	716	4.71	814	6.12	901	7.66	981	9.32	1056	11.0	1127	12.7	1194	14.4	1257	16.2
8000	4060	731	6.43	820	8.20	909	10.1	989	12.0	1062	13.9	1130	15.8	1194	17.9	1256	20.1	1314	22.3
10000	5076	875	11.5	944	13.5	1016	15.7	1088	18.1	1157	20.5	1221	22.8	1281	25.1	1338	27.5	1393	30.0
12000	6091	1025	19.0	1082	21.1	1139	23.5	1200	26.3	1261	29.1	1320	32.0	1377	34.8	1432	37.7	1484	40.5
14000	7106	1177	29.3	1228	31.7	1276	34.3	1325	37.1	1376	40.2	1429	43.6	1481	46.9	1532	50.3	1581	53.5
16000	8121	1333	43.0	1377	45.6	1419	48.3	1462	51.4	1505	54.7	1549	58.2	1595	61.9	1640	65.6	1686	69.5
18000	9137	1488	60.4	1528	63.3	1567	66.4	1604	69.5	1642	73.0	1680	76.6	1719	80.5	1759	84.5	1800	88.7
20000	10152	1646	82.1	1680	85.2	1716	88.6	1751	92.1	1785	95.7	1819	99.5	1853	104	1888	108	1923	112
22000	11167	1804	109	1836	112	1868	116	1900	119	1931	123	1961	127	1993	131	2024	136	2055	140
24000	12182	1960	140	1991	144	2020	148	2050	152	2078	156	2108	160	2136	164	2164	169	2193	174
26000	13197	2117	177	2147	182	2175	186	2203	190	2229	194	2255	199	2282	203	2309	208		
28000	14213	2275	220	2306	226														

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6000	3045	1318	18.0	1376	19.8	1431	21.7	1484	23.6	1536	25.6	1586	27.7	1635	29.9	1682	32.1	1729	34.4
8000	4060	1371	24.6	1426	26.9	1479	29.1	1531	31.4	1581	33.7	1629	36.0	1677	38.4	1722	40.7	1767	43.1
10000	5076	1445	32.5	1496	35.1	1545	37.8	1593	40.6	1640	43.4	1686	46.3	1731	49.2	1775	52.0	1818	54.8
12000	6091	1534	43.3	1582	46.1	1628	49.0	1673	51.9	1717	54.9	1760	58.1	1802	61.3	1843	64.5	1883	67.8
14000	7106	1629	56.8	1675	60.1	1720	63.4	1763	66.6	1805	69.9	1846	73.2	1886	76.6	1925	80.0	1964	83.5
16000	8121	1731	73.3	1775	77.1	1818	80.9	1859	84.6	1900	88.4	1940	92.2	1978	95.8	2016	99.6	2053	103
18000	9137	1840	92.9	1881	97.2	1921	102	1961	106	2000	110	2038	114	2075	119	2111	123	2147	127
20000	10152	1959	117	1995	121	2032	126	2069	131	2105	135	2141	140	2177	145	2212	150	2246	154
22000	11167	2086	145	2119	150	2152	155	2185	160	2217	165	2251	170	2285	175				
24000	12182	2221	178	2250	183	2279	188	2309	194										

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
8000	4060	1810	45.5	1853	48.0	1894	50.5	1935	53.1	1975	55.7	2014	58.3	2052	61.0	2090	63.8	2127	66.6
10000	5076	1860	57.7	1901	60.5	1941	63.3	1981	66.2	2020	69.1	2058	71.9	2096	74.9	2132	77.8	2169	80.8
12000	6091	1923	71.2	1962	74.5	2000	77.9	2038	81.3	2075	84.7	2112	88.2	2148	91.5	2184	95.0	2219	98.4
14000	7106	2001	87.0	2038	90.6	2074	94.3	2110	98.1	2145	102	2180	106	2214	110	2248	114	2282	118
16000	8121	2089	107	2124	111	2159	115	2193	119	2227	123	2260	127	2293	131				
18000	9137	2183	131	2217	135	2251	140	2284	144										
20000	10152	2280	159	2314	164														

Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.



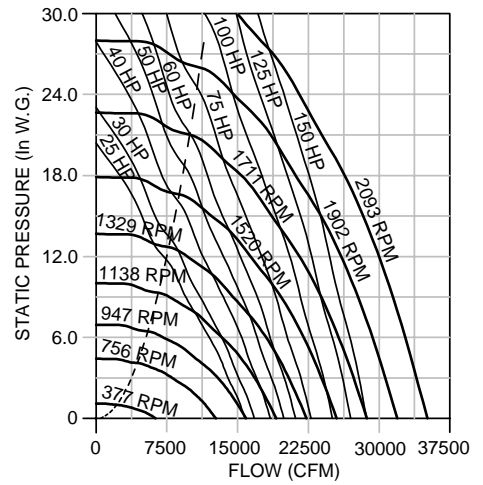
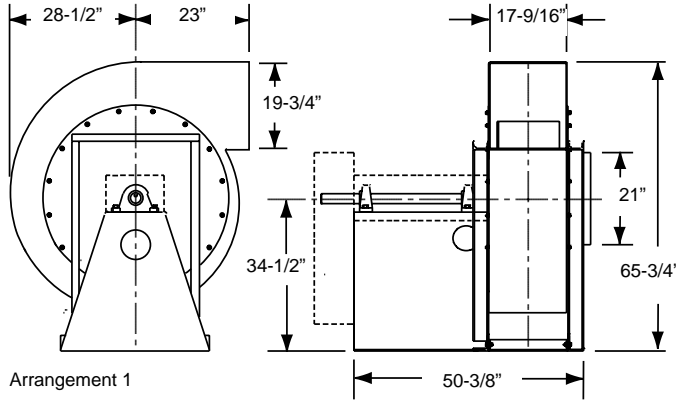
# 210 MHB Data

Wheel Diameter - 36-1/2 in.  
 Wheel Type - Radial Blade  
 Tip Speed (FPM) = 9.56 x RPM  
 Typical BHP = 17.2 (RPM/1000)<sup>3</sup>  
 Inlet Area - 2.32 sq. ft. inside area

Outlet Area - 2.41 sq. ft. inside area  
 Outlet Velocity (FPM) = CFM/2.41  
 Max. Motor Frame - 326T (Arr. 9 & 10)  
 Approx. Ship Wt. - 1469 lbs. (SD Arr. 1)

## Maximum Speeds

Standard Duty
1256
Heavy Duty
2093



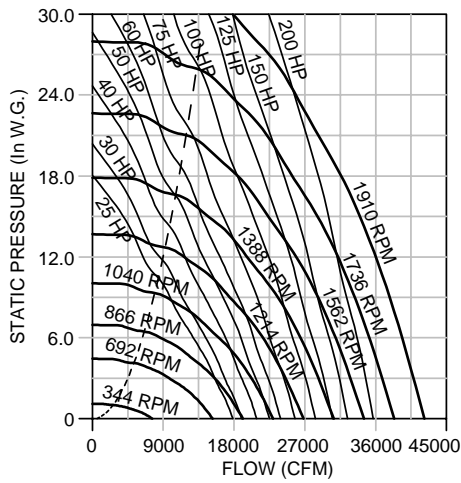
## 210 MHB

CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2500	1037	377	.69																
5000	2074	449	1.77	567	3.00	668	4.28	754	5.55										
7500	3112	549	4.05	650	5.53	735	7.26	812	9.13	887	11.1	955	13.0	1017	14.9	1076	16.8	1131	18.7
10000	4149	672	8.06	749	9.99	825	11.9	897	14.1	961	16.5	1020	18.9	1077	21.4	1134	24.0	1188	26.6
12500	5186	806	14.4	867	16.9	928	19.2	990	21.5	1050	24.0	1108	26.9	1161	29.8	1210	32.7	1257	35.7
15000	6224	945	23.7	995	26.4	1047	29.6	1098	32.4	1149	35.0	1200	37.8	1250	40.8	1299	44.2	1346	47.7
17500	7261	1087	36.7	1130	39.6	1174	43.0	1217	46.6	1261	50.0	1305	53.1	1348	56.1	1392	59.3	1436	62.9
20000	8298	1232	54.0	1269	57.0	1306	60.5	1344	64.5	1383	68.8	1421	72.7	1459	76.3	1498	79.9	1536	83.3
22500	9336	1376	75.9	1410	79.3	1443	82.9	1476	87.0	1510	91.5	1544	96.2	1578	101	1612	105	1647	109
25000	10373	1523	103	1551	107	1582	111	1612	115	1642	120	1673	125	1703	130	1734	135	1765	140
27500	11410	1670	137	1696	141	1723	145	1750	149	1777	154	1805	159	1833	165	1861	170	1889	176
30000	12448	1815	176	1840	181	1865	185	1890	190	1915	195	1940	200	1965	205	1991	212	2016	218
32500	13485	1961	223	1986	228	2009	233	2032	238	2055	243	2078	248						

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7500	3112	1186	20.9	1239	23.2														
10000	4149	1240	29.2	1289	31.7	1336	34.2	1381	36.7	1424	39.2	1467	41.8	1509	44.5	1550	47.3	1590	50.1
12500	5186	1303	38.8	1349	42.0	1394	45.2	1439	48.5	1483	51.9	1525	55.1	1565	58.2	1605	61.5	1642	64.5
15000	6224	1389	51.1	1431	54.7	1471	58.2	1510	61.8	1548	65.5	1587	69.3	1625	73.2	1663	77.1	1700	80.9
17500	7261	1479	66.7	1520	70.6	1560	74.6	1598	78.6	1635	82.8	1670	86.9	1705	91.1	1739	95.3	1772	99.5
20000	8298	1574	86.9	1612	90.7	1650	94.9	1688	99.3	1724	104	1760	108	1794	113	1827	118	1860	122
22500	9336	1681	113	1715	117	1749	121	1783	125	1816	130	1850	134	1884	139	1917	144	1949	149
25000	10373	1796	145	1826	149	1856	154	1887	158	1918	163	1948	167	1979	172	2009	176	2040	181
27500	11410	1916	182	1945	187	1972	192	2000	197	2028	202	2056	207	2083	212				
30000	12448	2042	224	2068	231	2093	236												

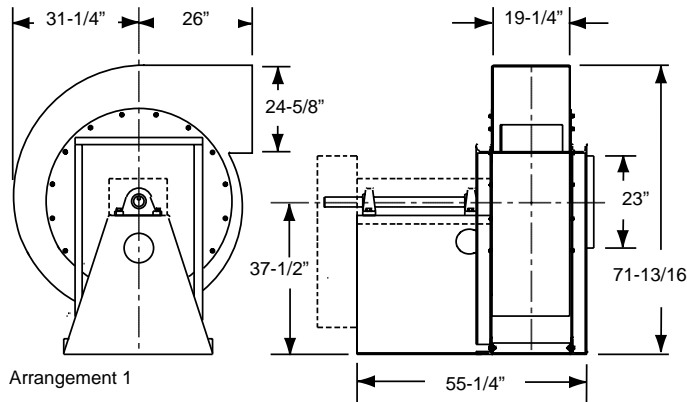
CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
10000	4149	1630	53.2																
12500	5186	1679	67.6	1715	70.7	1750	73.8	1785	77.0	1819	80.2	1853	83.5	1886	86.9	1919	90.3	1951	93.8
15000	6224	1737	84.9	1773	88.8	1809	92.8	1843	96.7	1877	101	1910	104	1942	108	1973	112	2004	116
17500	7261	1805	104	1838	108	1870	113	1903	117	1935	122	1968	126	2000	131	2031	136	2062	140
20000	8298	1891	127	1921	132	1951	136	1981	141	2010	146	2039	151	2068	156				
22500	9336	1980	154	2011	160	2041	165	2070	170										
25000	10373	2070	187																

Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.



**Wheel Diameter** - 40 in.  
**Wheel Type** - Radial Blade  
**Tip Speed (FPM)** = 10.47 x RPM  
**Typical BHP** = 27.1 (RPM/1000)<sup>3</sup>  
**Inlet Area** - 2.80 sq. ft. inside area

**Outlet Area** - 2.89 sq. ft. inside area  
**Outlet Velocity (FPM)** = CFM/2.89  
**Max. Motor Frame** - 326T (Arr. 9 & 10)  
**Approx. Ship Wt.** - 1811 lbs. (SD Arr. 1)



Maximum Speeds	
Standard Duty	1146
Heavy Duty	1910

## 230 MHB

CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3000	1034	344	.83																
6000	2068	409	2.11	517	3.59	610	5.13	689	6.68										
9000	3103	501	4.85	593	6.62	671	8.72	742	11.0	809	13.3	872	15.7	929	17.9	982	20.1	1033	22.5
12000	4137	613	9.65	683	11.9	753	14.2	819	16.9	877	19.7	931	22.7	983	25.6	1035	28.8	1085	32.0
15000	5172	735	17.2	791	20.2	847	23.0	903	25.7	958	28.7	1011	32.2	1059	35.6	1104	39.2	1147	42.8
18000	6206	862	28.4	908	31.7	955	35.4	1001	38.7	1048	41.9	1095	45.2	1141	48.9	1186	53.0	1228	57.1
21000	7241	991	43.9	1030	47.3	1070	51.4	1110	55.8	1151	60.0	1191	63.7	1230	67.2	1271	71.2	1310	75.3
24000	8275	1123	64.5	1157	68.2	1191	72.4	1226	77.2	1261	82.2	1296	87.0	1331	91.4	1366	95.5	1401	99.7
27000	9310	1254	90.6	1285	94.7	1316	99.2	1346	104	1377	110	1409	115	1440	121	1471	126	1502	131
30000	10344	1389	124	1415	128	1443	133	1470	138	1498	143	1526	149	1554	156	1582	162	1610	168
33000	11379	1522	163	1547	168	1571	173	1596	178	1621	184	1646	190	1672	197	1697	204	1723	211
36000	12413	1655	211	1678	216	1701	222	1724	227	1746	233	1769	239	1792	246	1816	253	1839	261
39000	13448	1788	267	1811	273	1832	279	1853	285	1874	291	1895	297						

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9000	3103	1083	25.1	1132	27.9														
12000	4137	1132	35.0	1177	38.1	1220	41.1	1261	44.0	1301	47.1	1339	50.1	1377	53.3	1415	56.7	1452	60.2
15000	5172	1190	46.6	1231	50.3	1273	54.3	1314	58.2	1353	62.1	1392	66.1	1429	69.9	1465	73.7	1500	77.5
18000	6206	1268	61.3	1306	65.5	1342	69.7	1378	74.1	1413	78.5	1448	83.0	1483	87.7	1518	92.4	1552	97.1
21000	7241	1349	79.8	1387	84.5	1424	89.5	1459	94.4	1492	99.2	1525	104	1556	109	1587	114	1617	119
24000	8275	1436	104	1471	109	1506	114	1540	119	1574	124	1606	130	1638	136	1668	141	1697	147
27000	9310	1533	136	1564	140	1595	145	1627	150	1658	155	1688	161	1719	167	1749	173	1778	179
30000	10344	1638	174	1666	179	1694	184	1722	189	1750	195	1778	200	1806	206	1834	211	1862	218
33000	11379	1748	218	1774	224	1799	230	1824	236	1850	242	1876	248	1901	254				
36000	12413	1862	268	1886	276	1909	283												

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
12000	4137	1489	64.0																
15000	5172	1533	81.1	1566	84.8	1598	88.5	1630	92.4	1661	96.2	1691	100	1722	104	1752	108	1782	113
18000	6206	1586	102	1619	107	1651	111	1683	116	1714	121	1744	125	1773	130	1802	134	1830	139
21000	7241	1647	124	1677	130	1707	135	1737	141	1767	146	1796	151	1825	157	1854	163	1883	168
24000	8275	1726	152	1754	158	1781	164	1808	169	1835	175	1861	181	1887	187				
27000	9310	1807	185	1835	191	1863	198	1889	204										
30000	10344	1889	224																

Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

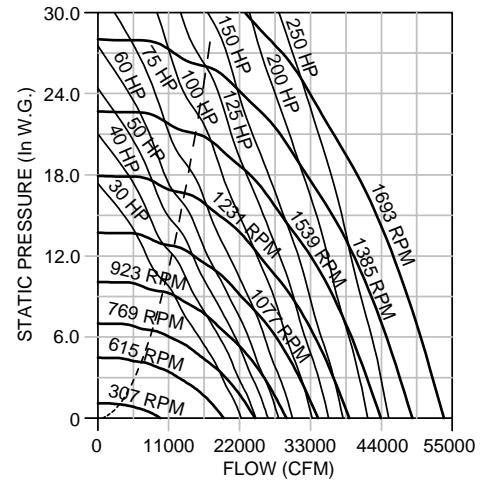
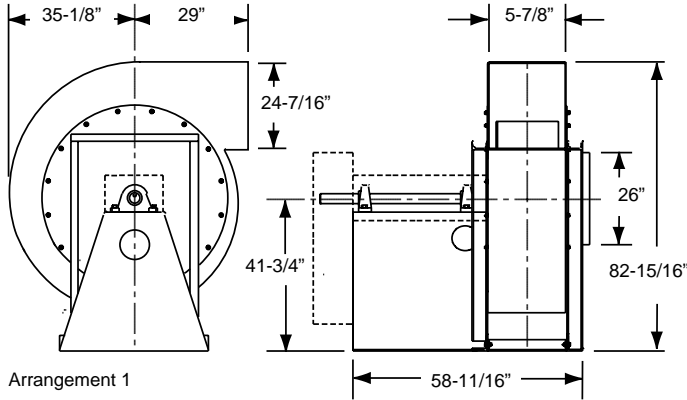
# 260 MHB Data

Wheel Diameter - 45-1/8 in.  
 Wheel Type - Radial Blade  
 Tip Speed (FPM) = 11.81 x RPM  
 Typical BHP = 50.0 (RPM/1000)<sup>3</sup>  
 Inlet Area - 3.59 sq. ft. inside area

Outlet Area - 3.69 sq. ft. inside area  
 Outlet Velocity (FPM) = CFM/3.69  
 Max. Motor Frame - 326T (Arr. 9 & 10)  
 Approx. Ship Wt. - 2318 lbs. (SD Arr. 1)

## Maximum Speeds

Standard Duty
1016
Heavy Duty
1693



## 260 MHB

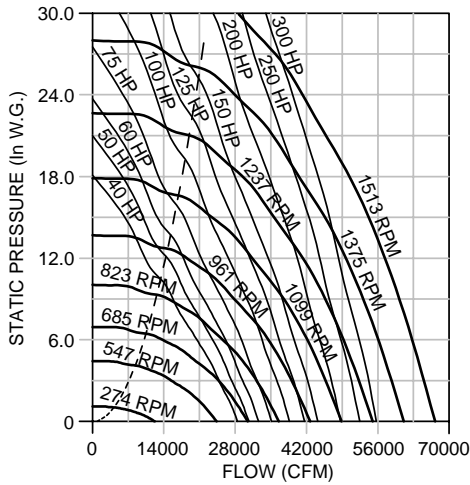
CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4000	1084	307	1.12																
8000	2168	370	2.93	463	4.85	545	6.93	614	8.93	678	11.2								
12000	3252	457	6.88	536	9.18	605	11.9	665	14.8	724	18.0	779	21.1	830	24.2	877	27.1	921	30.1
16000	4336	563	13.8	623	17.0	682	19.9	739	23.3	791	27.1	838	30.9	882	34.7	927	38.9	970	43.1
20000	5420	678	24.8	725	28.8	772	32.6	820	36.2	867	40.0	913	44.4	956	49.0	996	53.8	1033	58.4
24000	6504	797	41.3	835	45.4	875	50.4	914	55.0	954	59.3	993	63.5	1033	68.3	1071	73.2	1109	78.8
28000	7588	917	63.8	951	68.5	984	73.7	1018	79.6	1052	85.2	1086	90.4	1119	95.1	1153	100	1187	105
32000	8672	1040	94.1	1069	98.9	1098	104	1127	111	1156	117	1186	124	1216	130	1246	136	1275	141
36000	9756	1163	133	1189	138	1214	143	1240	150	1266	157	1293	165	1319	172	1345	179	1372	186
40000	10840	1288	181	1310	186	1333	192	1356	199	1379	206	1403	214	1426	222	1450	230	1474	239
44000	11924	1411	239	1432	245	1453	252	1474	258	1495	266	1516	274	1538	283	1559	291	1581	301
48000	13008	1534	308	1554	315	1574	323	1593	330	1613	338	1632	346	1651	354	1671	364	1690	373
52000	14092	1658	390	1679	399														

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
12000	3252	964	33.3	1006	36.7	1047	40.4												
16000	4336	1012	47.3	1052	51.4	1090	55.4	1126	59.4	1161	63.3	1195	67.3	1228	71.4	1261	75.7	1292	79.9
20000	5420	1069	63.2	1105	68.2	1141	73.4	1176	78.6	1210	83.7	1244	89.0	1277	94.2	1309	99.4	1340	105
24000	6504	1144	84.2	1178	89.9	1210	95.5	1241	101	1271	107	1301	113	1331	119	1360	125	1390	131
28000	7588	1220	111	1253	117	1286	124	1317	130	1347	137	1375	143	1403	150	1430	156	1456	163
32000	8672	1304	147	1334	153	1364	159	1393	165	1422	172	1451	180	1478	187	1505	194	1532	202
36000	9756	1398	192	1424	199	1450	205	1477	211	1503	218	1529	225	1556	232	1581	239	1607	247
40000	10840	1498	247	1521	254	1545	262	1569	269	1592	275	1616	282	1640	290	1663	297	1687	304
44000	11924	1602	310	1624	319	1645	327	1667	336	1688	344								

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
16000	4336	1324	84.5	1355	89.2	1386	94.2												
20000	5420	1370	110	1399	115	1427	119	1455	124	1482	129	1509	135	1535	140	1561	145	1587	150
24000	6504	1419	137	1448	144	1476	150	1504	156	1532	163	1558	169	1585	175	1610	181	1635	187
28000	7588	1482	170	1508	177	1533	183	1558	190	1584	198	1609	205	1634	212	1659	219	1684	227
32000	8672	1557	209	1582	217	1606	224	1629	231	1652	239	1675	247						
36000	9756	1632	255	1657	264	1681	272												

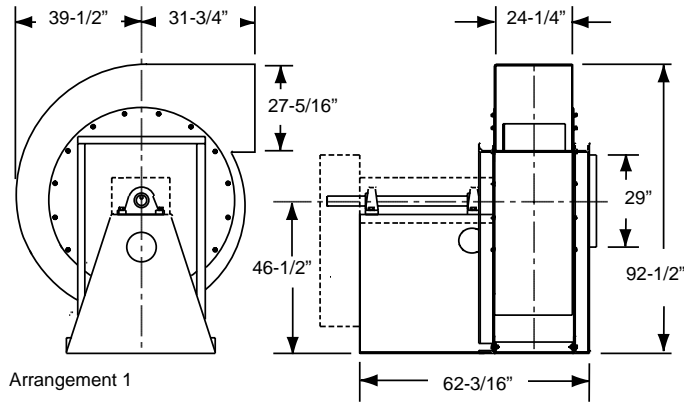
Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

# Data MHB 290



**Wheel Diameter** - 50-1/2 in.  
**Wheel Type** - Radial Blade  
**Tip Speed FPM** = 13.22 x RPM  
**Typical BHP** = 86.4 (RPM/1000)<sup>3</sup>  
**Inlet Area** - 4.47 sq. ft. inside area

**Outlet Area** - 4.60 sq. ft. inside area  
**Outlet Velocity (FPM)** = CFM/4.60  
**Max. Motor Frame** - 326T (Arr. 9 & 10)  
**Approx. Ship Wt.** - 2895 lbs. (SD Arr. 1)



Maximum Speeds	
Standard Duty	908
Heavy Duty	1513

## 290 MHB

CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5000	1082	274	1.39																
10000	2164	330	3.64	414	6.08	487	8.66	549	11.2	606	14.0								
15000	3246	408	8.58	478	11.4	540	14.9	594	18.5	647	22.5	696	26.4	741	30.1	783	33.8	823	37.7
20000	4329	503	17.2	556	21.2	609	24.8	660	29.1	706	33.7	748	38.5	788	43.4	828	48.6	867	53.9
25000	5411	605	31.0	647	35.9	689	40.7	732	45.1	774	49.9	815	55.4	854	61.3	889	67.0	923	73.0
30000	6493	711	51.4	745	56.5	781	62.9	816	68.6	851	73.8	887	79.3	922	85.1	957	91.6	990	98.2
35000	7575	818	79.5	848	85.2	878	91.9	908	99.0	939	106	969	113	999	119	1029	125	1060	132
40000	8658	927	117	953	123	979	130	1005	138	1032	146	1059	155	1085	162	1112	169	1138	176
45000	9740	1037	165	1060	171	1083	179	1106	187	1130	196	1153	205	1177	214	1201	224	1224	232
50000	10822	1148	225	1168	232	1189	239	1210	248	1231	257	1252	267	1273	277	1294	287	1315	297
55000	11904	1259	298	1278	306	1296	313	1315	322	1334	331	1353	341	1372	352	1391	363	1410	374
60000	12987	1368	384	1386	393	1404	402	1421	410	1439	421	1456	431	1473	441	1491	453	1508	465
65000	14069	1479	486	1497	496	1513	506												

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
15000	3246	861	41.6	899	46.0	936	50.6												
20000	4329	904	59.0	940	64.3	974	69.3	1006	74.2	1037	79.1	1068	84.2	1097	89.2	1126	94.5	1155	100
25000	5411	955	79.0	987	85.2	1019	91.6	1050	98.0	1081	105	1112	111	1141	118	1170	124	1197	131
30000	6493	1022	105	1052	112	1081	119	1108	126	1135	133	1162	141	1189	149	1215	156	1241	164
35000	7575	1090	139	1119	146	1148	154	1176	162	1202	170	1228	178	1253	187	1277	195	1300	203
40000	8658	1164	183	1191	190	1217	198	1244	206	1270	215	1295	224	1320	233	1344	242	1368	252
45000	9740	1248	240	1271	248	1295	256	1318	263	1342	272	1365	280	1389	290	1412	299	1435	309
50000	10822	1337	308	1358	317	1379	326	1400	335	1421	343	1443	352	1464	361	1485	370	1506	379
55000	11904	1430	386	1449	397	1468	408	1488	419	1507	429								

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20000	4329	1183	106	1211	112	1239	118												
25000	5411	1224	137	1250	143	1275	149	1300	156	1324	162	1348	168	1371	174	1395	181	1418	188
30000	6493	1267	172	1293	179	1319	188	1344	196	1368	203	1392	211	1416	219	1438	226	1461	234
35000	7575	1323	212	1346	220	1369	229	1392	238	1415	247	1437	256	1460	265	1482	274	1504	283
40000	8658	1390	261	1412	270	1434	280	1455	289	1476	299	1496	308						
45000	9740	1458	319	1480	329	1501	339												

Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

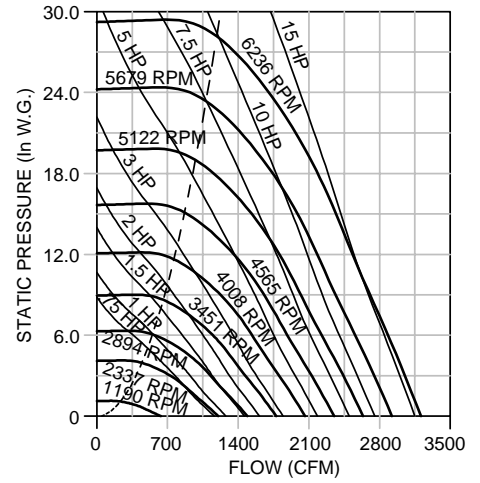
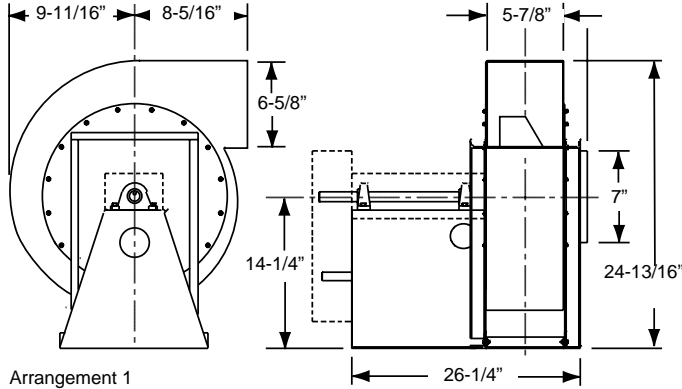
# 70 MHA Data

Wheel Diameter - 12-1/4 in.  
 Wheel Type - Backward Inclined Flat Blade  
 Tip Speed (FPM) = 3.21 x RPM  
 Typical BHP = .049 (RPM/1000)<sup>3</sup>  
 Inlet Area - .24 sq. ft. inside area

Outlet Area - .27 sq. ft. inside area  
 Outlet Velocity (FPM) - CFM/.27  
 Max. Motor Frame - 184T (Arr. 9 & 10)  
 Approx. Ship Wt. - 239 lbs. (SD Arr. 1)

## Maximum Speeds

Standard Duty
3742
Heavy Duty
6236



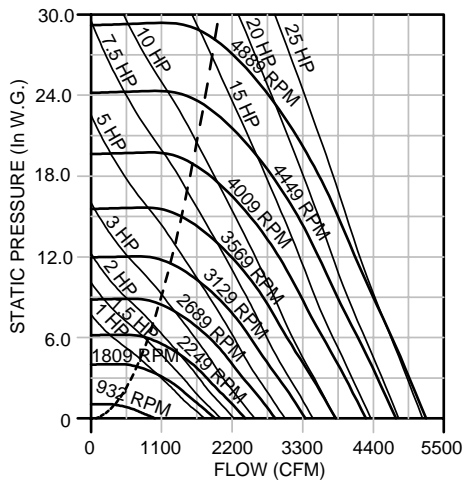
## 70 MHA

CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
250	925	1190	.07																
450	1666	1385	.15	1760	.26	2074	.39												
650	2407	1670	.28	1975	.43	2251	.59	2502	.76	2730	.94	2942	1.13	3142	1.33				
850	3148	1994	.49	2254	.68	2487	.87	2710	1.07	2918	1.28	3115	1.50	3300	1.73	3477	1.97	3645	2.21
1050	3888	2327	.80	2572	1.04	2775	1.27	2964	1.50	3150	1.74	3329	1.99	3500	2.25	3665	2.52	3824	2.79
1250	4629	2673	1.22	2898	1.52	3091	1.80	3262	2.07	3423	2.34	3581	2.62	3737	2.91	3888	3.21	4035	3.52
1450	5370	3032	1.8	3231	2.14	3417	2.48	3580	2.81	3729	3.12	3870	3.42	4008	3.74	4145	4.07	4279	4.40
1650	6111	3397	2.54	3576	2.92	3746	3.31	3905	3.7	4050	4.07	4183	4.43	4310	4.78	4432	5.13	4553	5.49
1850	6851	3765	3.46	3928	3.89	4085	4.33	4235	4.77	4375	5.20	4505	5.62	4627	6.02	4742	6.42	4854	6.81
2050	7592	4142	4.62	4287	5.08	4431	5.56	4568	6.04	4704	6.54	4831	7.02	4950	7.48	5062	7.93	5169	8.37
2250	8333	4513	5.98	4649	6.49	4782	7.02	4910	7.54	5038	8.09	5160	8.63	5277	9.16	5388	9.68	5492	10.2
2450	9074	4896	7.64	5019	8.19	5140	8.74	5259	9.31	5379	9.90	5494	10.5	5606	11.1	5714	11.7	5817	12.2
2650	9814	5279	9.59	5388	10.1	5502	10.8	5615	11.4	5726	12.0	5834	12.6	5941	13.3	6044	13.9	6144	14.5
2850	10555	5659	11.8	5765	12.4	5870	13.1	5973	13.7	6076	14.4	6180	15.1						
3050	11296	6037	14.4	6138	15.0														

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
850	3148	3807	2.46	3963	2.71	4113	2.97	4259	3.24										
1050	3888	3976	3.07	4123	3.36	4265	3.65	4403	3.94	4538	4.25	4669	4.56	4796	4.87	4922	5.19	5043	5.50
1250	4629	4178	3.83	4317	4.14	4452	4.46	4584	4.79	4711	5.12	4836	5.46	4958	5.81	5077	6.15	5194	6.51
1450	5370	4412	4.75	4541	5.10	4667	5.45	4792	5.81	4913	6.17	5031	6.54	5148	6.92	5262	7.29	5373	7.67
1650	6111	4673	5.86	4792	6.24	4910	6.62	5026	7.02	5139	7.41	5252	7.81	5362	8.22	5470	8.63	5577	9.04
1850	6851	4963	7.20	5071	7.60	5179	8.02	5286	8.44	5391	8.86	5496	9.30	5600	9.74	5703	10.2	5803	10.6
2050	7592	5273	8.81	5373	9.24	5473	9.68	5571	10.1	5668	10.6	5764	11.0	5860	11.5	5956	12.0	6051	12.5
2250	8333	5593	10.7	5689	11.1	5782	11.6	5875	12.1	5966	12.6	6056	13.1	6144	13.6	6232	14.0		
2450	9074	5916	12.8	6011	13.3	6103	13.8	6191	14.4										

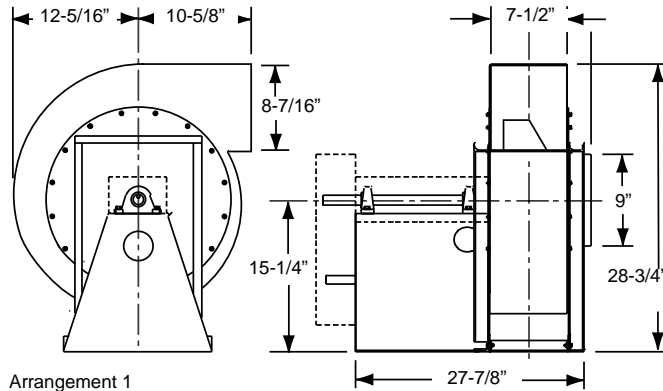
CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1050	3888	5164	5.83	5280	6.16														
1250	4629	5308	6.86	5420	7.22	5530	7.59	5638	7.96	5744	8.33	5850	8.71	5952	9.09	6054	9.48	6154	9.87
1450	5370	5483	8.06	5590	8.45	5696	8.85	5800	9.25	5902	9.65	6003	10.1	6101	10.5	6200	10.9		
1650	6111	5681	9.46	5785	9.88	5886	10.3	5986	10.7	6085	11.2	6181	11.6						
1850	6851	5903	11.1	6000	11.5	6098	12.0	6192	12.4										
2050	7592	6145	12.9																

Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.



**Wheel Diameter** - 15-5/8 in.  
**Wheel Type** - Backward Inclined Flat Blade  
**Tip Speed FPM** - 4.09 x RPM  
**Typical BHP** = .17 (RPM/1000)<sup>3</sup>  
**Inlet Area** = .41 sq. ft. inside area

**Outlet Area** = .44 sq. ft. inside area  
**Outlet Velocity (FPM)** = CFM/.44  
**Max. Motor Frame** - 184T (Arr. 9 & 10)  
**Approx. Ship Wt.** - 321 lbs. (SD Arr. 1)



Maximum Speeds	
Standard Duty	2934
Heavy Duty	4889

## 90 MHA

CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
400	909	932	.12																
800	1818	1127	.27	1411	.47	1651	.69	1863	.93										
1200	2727	1420	.59	1638	.85	1842	1.14	2029	1.44	2201	1.75	2362	2.08	2514	2.43	2657	2.78	2795	3.15
1600	3636	1737	1.12	1932	1.48	2097	1.82	2254	2.18	2406	2.56	2551	2.96	2690	3.36	2822	3.78	2949	4.20
2000	4545	2068	1.91	2246	2.39	2398	2.83	2532	3.26	2661	3.69	2787	4.15	2910	4.62	3030	5.10	3147	5.59
2400	5454	2413	3.06	2567	3.62	2712	4.19	2840	4.74	2956	5.25	3065	5.76	3171	6.27	3277	6.81	3381	7.36
2800	6363	2766	4.62	2901	5.27	3032	5.94	3154	6.61	3266	7.24	3370	7.86	3466	8.44	3561	9.04	3652	9.64
3200	7272	3125	6.68	3242	7.40	3359	8.15	3474	8.93	3580	9.68	3682	10.4	3776	11.1	3865	11.8	3950	12.5
3600	8181	3484	9.28	3591	10.1	3698	10.9	3800	11.8	3902	12.7	3998	13.5	4090	14.4	4177	15.2	4260	16.0
4000	9090	3852	12.6	3947	13.4	4042	14.3	4135	15.3	4229	16.2	4320	17.2	4407	18.2	4492	19.1	4572	20.0
4400	10000	4220	16.5	4305	17.5	4390	18.4	4478	19.5	4564	20.5	4647	21.6	4729	22.6	4810	23.7	4889	24.7
4800	10909	4586	21.2	4667	22.3	4747	23.4	4826	24.4										

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	2727	2926	3.53																
1600	3636	3071	4.64	3188	5.09	3302	5.55	3412	6.01	3519	6.49	3624	6.97	3726	7.47	3826	7.97	3923	8.47
2000	4545	3259	6.09	3369	6.60	3475	7.11	3579	7.64	3680	8.18	3778	8.72	3874	9.28	3968	9.84	4060	10.4
2400	5454	3484	7.93	3585	8.51	3683	9.09	3780	9.68	3874	10.3	3966	10.9	4057	11.5	4146	12.1	4233	12.7
2800	6363	3743	10.3	3833	10.9	3922	11.5	4011	12.2	4099	12.9	4184	13.5	4269	14.2	4352	14.9	4435	15.6
3200	7272	4032	13.2	4113	13.9	4193	14.6	4272	15.3	4351	16.0	4430	16.7	4508	17.5	4585	18.2	4662	19.0
3600	8181	4339	16.8	4415	17.5	4489	18.3	4561	19.0	4633	19.8	4705	20.6	4775	21.4	4845	22.2		
4000	9090	4650	20.9	4725	21.8	4796	22.7	4865	23.5										

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2000	4545	4150	11.0	4238	11.6	4325	12.2	4410	12.8	4494	13.4	4576	14.0	4658	14.6	4738	15.2	4816	15.8
2400	5454	4318	13.4	4403	14.0	4484	14.7	4566	15.3	4646	16.0	4724	16.7	4802	17.4	4878	18.0		
2800	6363	4515	16.3	4595	17.0	4672	17.7	4751	18.4	4826	19.1								
3200	7272	4739	19.7	4812	20.5	4887	21.3												

Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

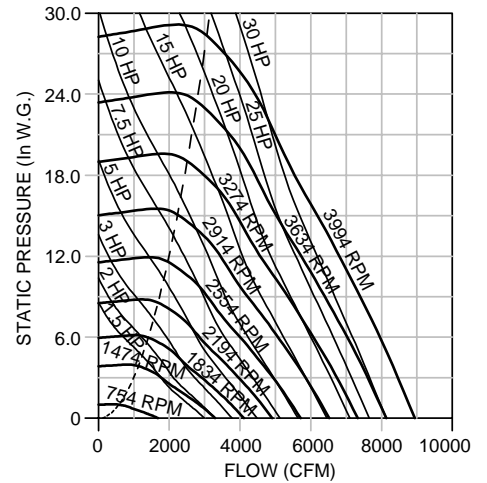
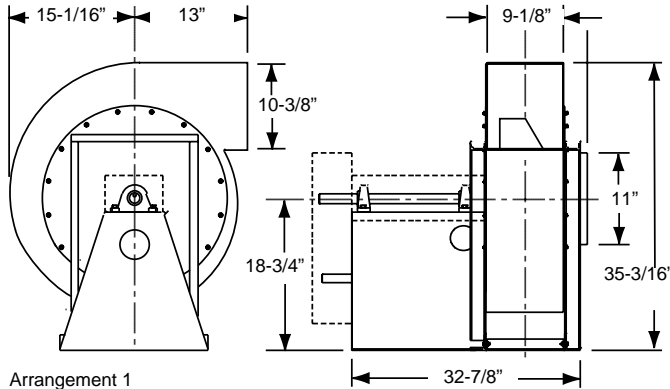
# 110 MHA Data

Wheel Diameter - 19-1/8 in.  
 Wheel Type - Backward Inclined Flat Blade  
 Tip Speed FPM = 5.01 x RPM  
 Typical BHP = .42 (RPM/1000)<sup>3</sup>  
 Inlet Area - .62 sq. ft. inside area

Outlet Area - .66 sq. ft. inside area  
 Outlet Velocity (FPM) = CFM/.66  
 Max. Motor Frame - 215T (Arr. 9 & 10)  
 Approx. Ship Wt. - 421 lbs. (SD Arr. 1)

## Maximum Speeds

Standard Duty
2397
Heavy Duty
3994



## 110 MHA

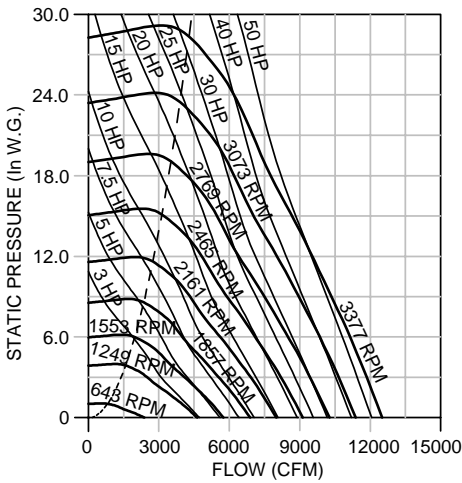
CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
600	909	754	.16																
1200	1818	907	.37	1133	.63	1333	.93	1507	1.25										
1800	2727	1096	.73	1316	1.16	1481	1.55	1628	1.93	1769	2.35	1904	2.79	2030	3.25	2148	3.73	2261	4.22
2400	3636	1307	1.30	1502	1.87	1672	2.44	1814	2.99	1936	3.49	2049	4.00	2159	4.53	2266	5.07	2371	5.64
3000	4545	1533	2.16	1707	2.85	1860	3.56	2000	4.28	2128	4.99	2241	5.67	2342	6.31	2437	6.94	2528	7.57
3600	5454	1772	3.38	1924	4.19	2065	5.02	2193	5.87	2313	6.73	2428	7.61	2534	8.46	2631	9.28	2721	10.1
4200	6363	2017	5.03	2152	5.97	2280	6.92	2400	7.90	2511	8.88	2616	9.88	2718	10.9	2816	11.9	2909	12.9
4800	7272	2270	7.20	2388	8.25	2504	9.33	2615	10.4	2720	11.5	2819	12.7	2913	13.8	3005	14.9	3094	16.1
5400	8181	2527	9.97	2631	11.1	2734	12.3	2837	13.5	2936	14.8	3030	16.0	3120	17.3	3205	18.5	3289	19.8
6000	9090	2783	13.4	2878	14.6	2974	16.0	3066	17.3	3157	18.6	3247	20.0	3333	21.4	3414	22.8	3494	24.2
6600	9999	3045	17.5	3132	18.9	3217	20.3	3301	21.7	3386	23.2	3469	24.7	3550	26.2	3630	27.8	3706	29.3
7200	10909	3309	22.5	3385	23.9	3464	25.5	3543	27.0	3621	28.6	3698	30.2	3774	31.9	3849	33.5	3922	35.2
7800	11818	3571	28.3	3644	29.9	3717	31.6	3789	33.2	3861	34.9	3932	36.6						
8400	12727	3830	35.0	3900	36.7	3968	38.5												

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2400	3636	2473	6.22	2571	6.82	2665	7.43	2756	8.05	2845	8.69	2931	9.34	3014	10.0				
3000	4545	2617	8.22	2704	8.88	2790	9.56	2875	10.3	2958	11.0	3040	11.7	3121	12.4	3199	13.2	3275	13.9
3600	5454	2805	10.8	2884	11.6	2961	12.4	3037	13.1	3110	13.9	3183	14.7	3256	15.5	3328	16.3	3399	17.1
4200	6363	2997	13.9	3079	14.9	3156	15.8	3229	16.7	3299	17.6	3367	18.4	3433	19.3	3498	20.2	3562	21.1
4800	7272	3181	17.3	3264	18.4	3344	19.6	3420	20.7	3493	21.8	3562	22.8	3628	23.9	3692	24.9	3753	25.9
5400	8181	3370	21.1	3450	22.4	3528	23.7	3604	25.0	3678	26.3	3749	27.6	3818	28.9	3883	30.1	3947	31.3
6000	9090	3571	25.6	3646	27.0	3719	28.4	3792	29.9	3863	31.3	3933	32.8						
6600	9999	3780	30.8	3851	32.4	3921	33.9	3990	35.5										
7200	10909	3994	36.9																

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3000	4545	3350	14.7	3423	15.5	3495	16.3	3564	17.1	3633	17.9	3701	18.7	3768	19.5				
3600	5454	3470	18.0	3539	18.8	3608	19.7	3675	20.5	3742	21.4	3807	22.3	3872	23.2	3935	24.1		
4200	6363	3625	22.0	3688	22.9	3750	23.8	3812	24.8	3874	25.7	3935	26.7						
4800	7272	3813	26.9	3871	27.9	3930	29.0	3986	30										

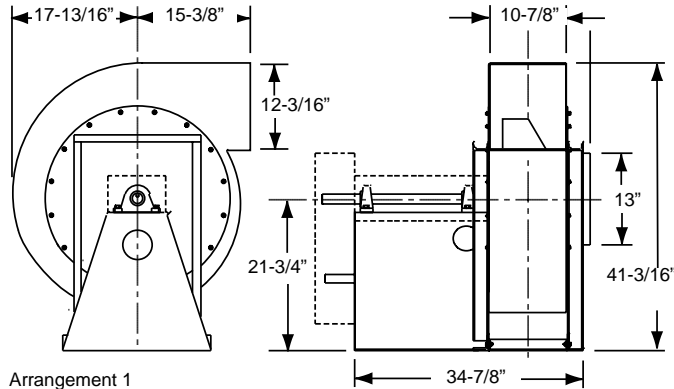
Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

# Data MHA 130



**Wheel Diameter** - 22-5/8 in.  
**Wheel Type** - Backward Inclined Flat Blade  
**Tip Speed FPM** - 5.92 x RPM  
**Typical BHP** = .97 (RPM/1000)<sup>3</sup>  
**Inlet Area** = .87 sq. ft. inside area

**Outlet Area** = .92 sq. ft. inside area  
**Outlet Velocity (FPM)** = CFM/.92  
**Max. Motor Frame** - 215T (Arr. 9 & 10)  
**Approx. Ship Wt.** - 564 lbs. (SD Arr. 1)



Maximum Speeds	
Standard Duty	2026
Heavy Duty	3377

## 130 MHA

CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
900	967	643	.23																
1800	1935	790	.58	976	.97	1140	1.40	1286	1.86										
2700	2903	964	1.17	1146	1.82	1287	2.41	1407	2.98	1521	3.58	1631	4.22	1736	4.88	1835	5.57	1929	6.29
3600	3870	1159	2.12	1318	2.96	1458	3.83	1580	4.67	1684	5.46	1777	6.21	1865	6.97	1952	7.76	2037	8.58
4500	4838	1367	3.57	1508	4.60	1633	5.65	1748	6.73	1855	7.82	1952	8.87	2040	9.88	2119	10.8	2194	11.8
5400	5806	1587	5.65	1708	6.85	1823	8.09	1928	9.36	2025	10.6	2119	11.9	2209	13.3	2292	14.5	2370	15.8
6300	6774	1813	8.48	1918	9.85	2022	11.3	2119	12.7	2210	14.2	2296	15.7	2379	17.2	2459	18.7	2537	20.2
7200	7741	2043	12.2	2136	13.7	2228	15.3	2318	17.0	2403	18.6	2484	20.3	2562	22.0	2636	23.7	2709	25.4
8100	8709	2276	16.9	2359	18.6	2440	20.4	2522	22.2	2602	24.0	2679	25.9	2753	27.8	2824	29.7	2891	31.6
9000	9677	2511	22.8	2587	24.7	2659	26.5	2734	28.6	2807	30.6	2879	32.6	2949	34.7	3017	36.8	3082	38.9
9900	10645	2750	29.9	2815	31.9	2884	34.0	2952	36.2	3018	38.4	3084	40.6	3150	42.8	3214	45.1	3277	47.4
10800	11612	2988	38.4	3050	40.6	3112	42.9	3174	45.2	3235	47.6	3296	49.9	3357	52.4				
11700	12580	3223	48.3	3282	50.7	3340	53.2												

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2700	2903	2018	7.01																
3600	3870	2120	9.42	2201	10.3	2280	11.2	2357	12.1	2430	13.0	2502	13.9	2572	14.9	2640	15.9	2706	16.9
4500	4838	2266	12.7	2336	13.7	2405	14.6	2474	15.7	2542	16.7	2609	17.7	2675	18.8	2740	19.9	2803	21.0
5400	5806	2442	17.0	2510	18.1	2574	19.3	2635	20.4	2696	21.5	2755	22.7	2813	23.8	2871	25.0	2928	26.2
6300	6774	2612	21.8	2682	23.2	2749	24.7	2812	26.1	2872	27.5	2929	28.8	2984	30.1	3038	31.5	3091	32.8
7200	7741	2779	27.1	2849	28.9	2916	30.6	2981	32.4	3043	34.1	3103	35.7	3160	37.4	3215	39.0	3268	40.6
8100	8709	2958	33.5	3022	35.4	3086	37.4	3148	39.3	3210	41.3	3269	43.2	3327	45.2				
9000	9677	3145	41.0	3206	43.1	3266	45.2	3325	47.4										
9900	10645	3337	49.7																

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4500	4838	2866	22.1	2927	23.2	2986	24.4	3045	25.5	3102	26.7	3159	27.9	3214	29.1	3269	30.3	3323	31.5
5400	5806	2984	27.4	3042	28.6	3097	29.9	3153	31.2	3207	32.4	3262	33.7	3315	35.0	3368	36.4		
6300	6774	3142	34.1	3193	35.4	3243	36.8	3293	38.1	3342	39.5								
7200	7741	3318	42.1	3368	43.7														

Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.



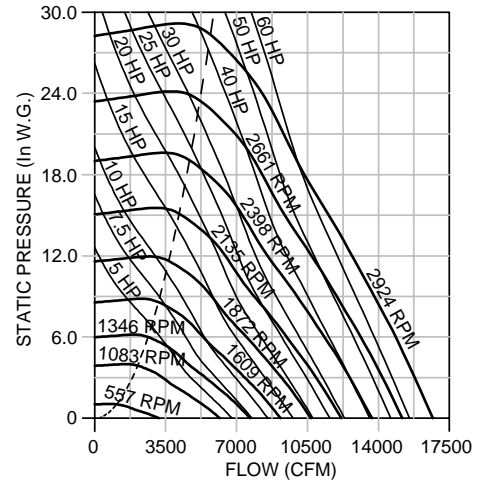
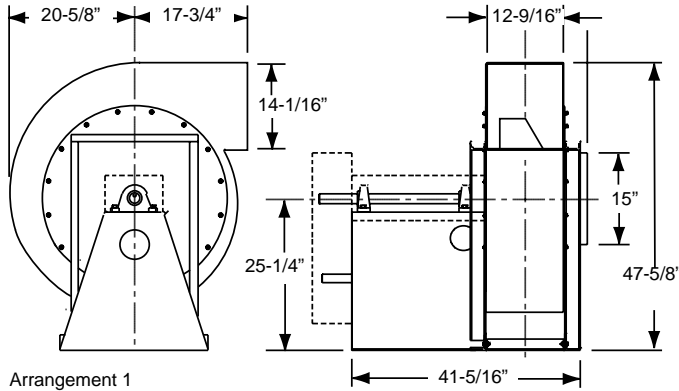
# 150 MHA Data

Wheel Diameter - 26-1/8 in.  
 Wheel Type - Backward Inclined Flat Blade  
 Tip Speed FPM = 6.84 x RPM  
 Typical BHP = 1.98 (RPM/1000)<sup>3</sup>  
 Inlet Area - 1.17 sq. ft. inside area

Outlet Area - 1.23 sq. ft. inside area  
 Outlet Velocity (FPM) = CFM/1.23  
 Max. Motor Frame - 256T (Arr. 9 & 10)  
 Approx. Ship Wt. - 749 lbs. (SD Arr. 1)

## Maximum Speeds

Standard Duty
1755
Heavy Duty
2924



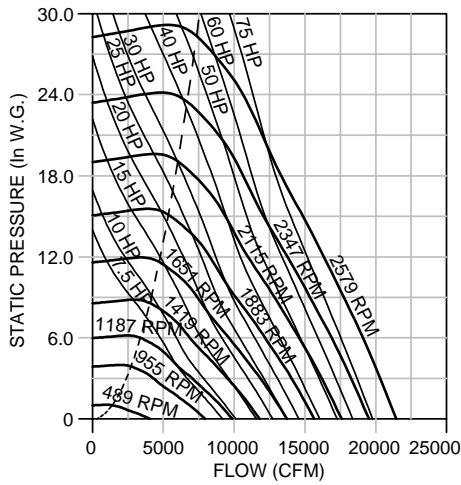
## 150 MHA

CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1200	967	557	.31																
2400	1935	684	.78	845	1.29	987	1.86	1114	2.49										
3600	2903	835	1.56	993	2.42	1114	3.21	1218	3.97	1317	4.77	1413	5.63	1503	6.51	1589	7.43	1670	8.37
4800	3870	1004	2.83	1141	3.94	1263	5.11	1368	6.23	1458	7.27	1539	8.28	1616	9.30	1691	10.4	1764	11.4
6000	4838	1184	4.76	1306	6.13	1414	7.53	1514	8.98	1606	10.4	1691	11.8	1766	13.2	1835	14.4	1900	15.7
7200	5806	1374	7.53	1480	9.14	1579	10.8	1669	12.5	1754	14.2	1835	15.9	1913	17.7	1985	19.4	2052	21.0
8400	6774	1570	11.3	1661	13.1	1751	15.0	1835	17.0	1914	18.9	1989	20.9	2060	22.9	2130	24.9	2197	27.0
9600	7741	1769	16.3	1850	18.3	1929	20.4	2007	22.6	2081	24.8	2152	27.1	2219	29.3	2283	31.6	2346	33.9
10800	8709	1971	22.5	2043	24.8	2114	27.2	2184	29.6	2254	32.1	2320	34.5	2384	37.1	2445	39.6	2504	42.1
12000	9677	2175	30.4	2241	32.9	2303	35.4	2368	38.1	2431	40.8	2494	43.5	2554	46.3	2612	49.0	2669	51.8
13200	10645	2382	39.9	2438	42.5	2498	45.4	2557	48.3	2614	51.2	2671	54.1	2728	57.1	2783	60.1	2838	63.2
14400	11612	2588	51.3	2642	54.2	2695	57.2	2749	60.3	2802	63.4	2854	66.6	2907	69.8				
15600	12580	2791	64.4	2842	67.6	2893	70.9												

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3600	2903	1748	9.35																
4800	3870	1836	12.6	1906	13.7	1975	14.9	2041	16.1	2105	17.3	2167	18.6	2227	19.9	2286	21.2	2343	22.5
6000	4838	1963	17.0	2023	18.2	2083	19.5	2143	20.9	2202	22.3	2260	23.7	2316	25.0	2373	26.5	2428	28.0
7200	5806	2115	22.6	2173	24.2	2229	25.7	2282	27.2	2335	28.7	2386	30.2	2436	31.8	2486	33.3	2536	34.9
8400	6774	2262	29.0	2323	31.0	2381	32.9	2435	34.8	2487	36.6	2537	38.4	2584	40.2	2631	42.0	2677	43.7
9600	7741	2407	36.2	2467	38.5	2525	40.8	2581	43.1	2635	45.4	2687	47.6	2737	49.9	2784	52.0	2830	54.1
10800	8709	2561	44.6	2617	47.2	2672	49.8	2727	52.5	2780	55.1	2831	57.6	2882	60.3				
12000	9677	2723	54.6	2777	57.5	2829	60.3	2879	63.1										
13200	10645	2890	66.2																

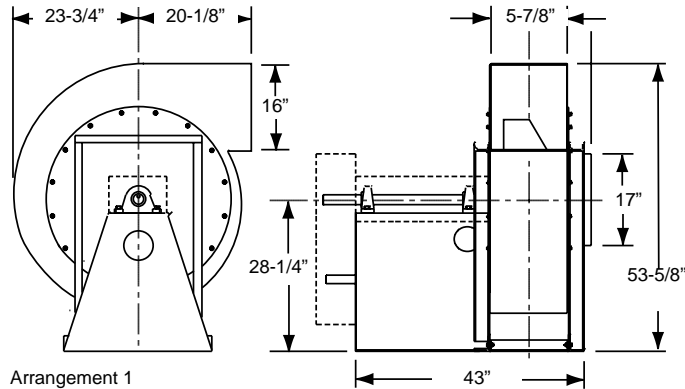
CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6000	4838	2482	29.5	2535	31.0	2586	32.5	2637	34.0	2687	35.6	2736	37.2	2784	38.8	2831	40.4	2878	42.0
7200	5806	2585	36.5	2634	38.2	2682	39.8	2731	41.6	2778	43.2	2825	45.0	2871	46.7	2917	48.5		
8400	6774	2721	45.5	2765	47.3	2809	49.1	2852	50.9	2895	52.7								
9600	7741	2874	56.2	2916	58.2														

Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.



**Wheel Diameter** - 29-5/8 in.  
**Wheel Type** - Backward Inclined Flat Blade  
**Tip Speed FPM** - 7.76 x RPM  
**Typical BHP** = 3.70 (RPM/1000)<sup>3</sup>  
**Inlet Area** = 1.51 sq. ft. inside area

**Outlet Area** = 1.58 sq. ft. inside area  
**Outlet Velocity (FPM)** = CFM/1.58  
**Max. Motor Frame** - 256T (Arr. 9 & 10)  
**Approx. Ship Wt.** - 955 lbs. (SD Arr. 1)



Maximum Speeds	
Standard Duty	1547
Heavy Duty	2579

## 170 MHA

CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1500	943	489	.39																
3000	1886	596	.96	739	1.60	866	2.32	978	3.11										
4500	2830	724	1.9	865	2.98	971	3.94	1064	4.90	1153	5.92	1238	6.99	1319	8.13	1395	9.29	1467	10.5
6000	3773	868	3.42	991	4.82	1099	6.26	1192	7.65	1271	8.94	1343	10.2	1411	11.5	1479	12.8	1545	14.2
7500	4716	1021	5.71	1131	7.43	1228	9.20	1317	11.0	1399	12.8	1473	14.5	1539	16.2	1600	17.8	1657	19.3
9000	5660	1183	9.00	1279	11.0	1368	13.1	1448	15.2	1524	17.3	1597	19.5	1666	21.7	1729	23.8	1788	25.8
10500	6603	1351	13.5	1433	15.8	1514	18.2	1590	20.6	1660	23.0	1727	25.5	1791	28.1	1853	30.6	1913	33.1
12000	7547	1520	19.3	1594	21.9	1665	24.6	1735	27.3	1802	30.1	1865	32.9	1925	35.7	1983	38.6	2039	41.5
13500	8490	1694	26.8	1759	29.7	1823	32.6	1887	35.7	1948	38.7	2009	41.9	2065	45.0	2120	48.1	2173	51.3
15000	9433	1867	36.0	1927	39.2	1985	42.4	2042	45.7	2100	49.1	2156	52.5	2210	56.0	2262	59.4	2313	63.0
16500	10377	2045	47.3	2096	50.6	2151	54.3	2203	57.8	2255	61.4	2307	65.1	2358	68.9	2408	72.7	2457	76.6
18000	11320	2221	60.7	2270	64.4	2318	68.2	2366	72.0	2414	75.9	2462	79.9	2510	84.0	2557	88.1		
19500	12264	2397	76.4	2443	80.5	2488	84.5	2533	88.7	2577	92.9								
21000	13207	2570	94.3																

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6000	3773	1609	15.6	1672	17.1	1733	18.6	1791	20.1	1848	21.7	1903	23.3	1956	24.9	2008	26.5		
7500	4716	1713	20.9	1768	22.5	1822	24.2	1875	25.9	1928	27.6	1980	29.4	2031	31.2	2081	33.0	2130	34.9
9000	5660	1842	27.8	1894	29.7	1943	31.6	1991	33.5	2037	35.4	2083	37.3	2128	39.2	2174	41.3	2218	43.3
10500	6603	1970	35.6	2023	38.0	2074	40.4	2122	42.8	2167	45.0	2210	47.2	2253	49.4	2294	51.6	2335	53.9
12000	7547	2094	44.4	2147	47.3	2199	50.2	2248	53.0	2296	55.8	2341	58.6	2384	61.2	2425	63.8	2465	66.4
13500	8490	2224	54.5	2274	57.7	2324	61.0	2372	64.3	2419	67.6	2465	70.8	2510	74.1	2552	77.2		
15000	9433	2361	66.4	2409	70.0	2455	73.5	2501	77.1	2546	80.8								
16500	10377	2504	80.4	2549	84.2														

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7500	4716	2178	36.8	2224	38.7	2270	40.6	2315	42.6	2359	44.5	2402	46.5	2445	48.6	2487	50.6	2528	52.7
9000	5660	2263	45.3	2306	47.4	2350	49.5	2393	51.7	2435	53.8	2477	56.0	2518	58.2	2559	60.5		
10500	6603	2375	56.1	2414	58.3	2453	60.6	2492	62.9	2530	65.1	2569	67.5						
12000	7547	2504	69.0	2542	71.6	2579	74.1												

Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

# 190 MHA Data

Wheel Diameter - 33 in.

Wheel Type - Backward Inclined Flat Blade

Tip Speed FPM = 8.64 x RPM

Typical BHP = 6.29 (RPM/1000)<sup>3</sup>

Inlet Area - 1.90 sq. ft. inside area

Outlet Area - 1.96 sq. ft. inside area

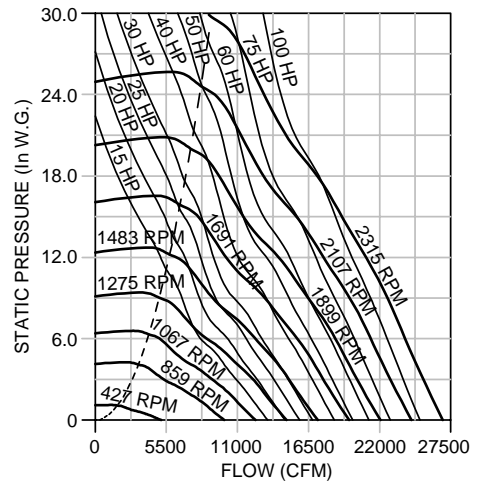
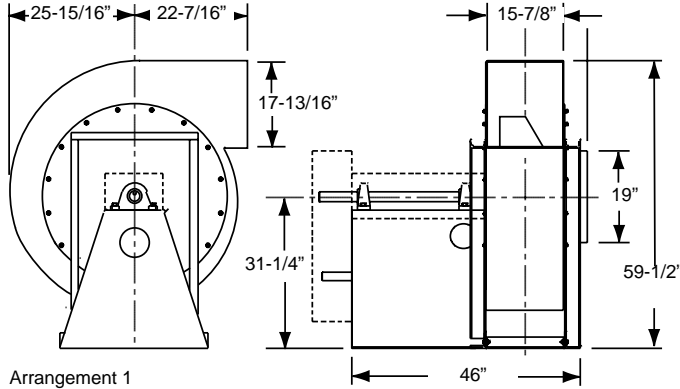
Outlet Velocity (FPM) = CFM/1.96

Max. Motor Frame - 256T (Arr. 9 & 10)

Approx. Ship Wt. - 1177 lbs. (SD Arr. 1)

## Maximum Speeds

Standard Duty
1389
Heavy Duty
2315



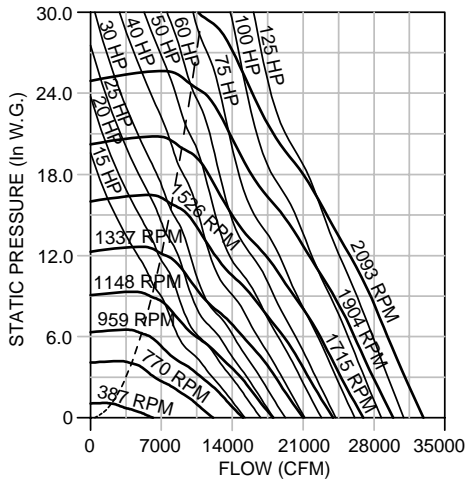
## 190 MHA

CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1750	888	427	.43																
3500	1776	519	1.09	651	1.84	753	2.52	853	3.40										
5250	2664	618	2.04	748	3.29	856	4.65	940	5.73	1012	6.69	1080	7.7	1147	8.82	1213	10.1	1280	11.5
7000	3553	733	3.60	847	5.16	944	6.72	1038	8.69	1118	10.5	1186	12.0	1246	13.4	1303	14.7	1356	16.0
8750	4441	864	6.00	958	7.90	1048	9.83	1127	11.7	1204	13.8	1280	16.4	1348	18.8	1408	20.9	1463	22.8
10500	5329	1001	9.43	1079	11.6	1159	13.9	1235	16.3	1304	18.5	1368	20.8	1432	23.4	1496	26.3	1557	29.3
12250	6218	1142	14.1	1212	16.6	1278	19.1	1346	21.9	1413	24.7	1474	27.3	1532	29.9	1587	32.5	1642	35.5
14000	7106	1283	20.2	1349	23.0	1407	25.8	1466	28.8	1525	31.9	1584	35.1	1641	38.3	1694	41.3	1744	44.2
15750	7994	1426	27.9	1488	31.1	1542	34.2	1594	37.4	1646	40.8	1698	44.3	1752	47.9	1803	51.4	1853	55.0
17500	8883	1572	37.5	1629	41.0	1680	44.5	1727	47.9	1774	51.6	1820	55.3	1868	59.2	1916	63.2	1963	67.1
19250	9771	1717	49.1	1770	52.9	1819	56.8	1864	60.6	1907	64.5	1949	68.4	1991	72.5	2033	76.6	2077	81.0
21000	10659	1864	63.0	1914	67.2	1959	71.3	2002	75.4	2043	79.7	2082	83.9	2120	88.1	2159	92.6	2198	97.1
22750	11548	2013	79.5	2056	83.7	2101	88.4	2143	93.0	2181	97.4	2218	102	2254	106	2289	111		
24500	12436	2161	98.5	2203	103	2244	108	2283	113										

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
7000	3553	1407	17.4	1457	18.7	1506	20.2	1556	21.8	1607	23.5	1657	25.3	1706	27.2	1754	29.1		
8750	4441	1513	24.6	1561	26.3	1606	27.9	1650	29.6	1692	31.2	1733	32.8	1773	34.5	1814	36.3	1854	38.1
10500	5329	1613	32.2	1665	34.8	1712	37.2	1757	39.5	1799	41.6	1840	43.7	1879	45.7	1917	47.7	1954	49.7
12250	6218	1697	38.7	1751	42.1	1804	45.7	1853	49.1	1900	52.4	1943	55.3	1984	58.1	2024	60.9	2061	63.5
14000	7106	1792	47.2	1840	50.3	1888	53.8	1936	57.5	1984	61.4	2031	65.5	2076	69.5	2119	73.4	2160	77.1
15750	7994	1899	58.3	1944	61.6	1988	64.9	2031	68.4	2073	71.9	2116	75.8	2159	80.0	2202	84.3	2244	88.8
17500	8883	2009	71.1	2054	75.0	2096	78.7	2137	82.3	2177	86.0	2216	89.8	2254	93.5	2293	97.6		
19250	9771	2121	85.4	2164	89.8	2206	94.2	2247	98.5	2286	103								
21000	10659	2238	102	2278	107														

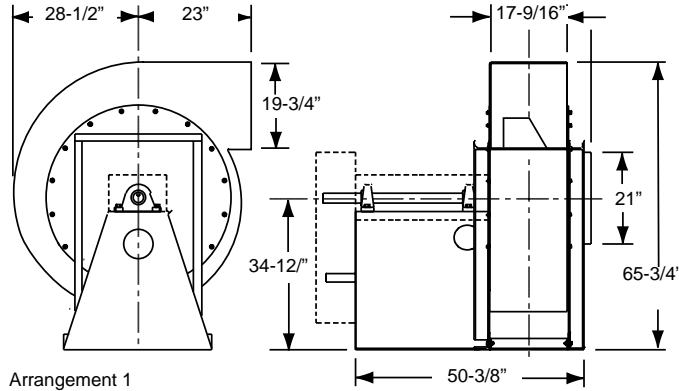
CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
8750	4441	1893	39.9	1933	41.9	1973	44.0	2014	46.2	2054	48.5	2093	50.8	2133	53.2	2171	55.5	2209	57.9
10500	5329	1990	51.7	2025	53.6	2059	55.5	2093	57.5	2127	59.6	2160	61.6	2193	63.7	2227	65.9	2260	68.1
12250	6218	2097	65.9	2132	68.4	2167	70.9	2200	73.2	2232	75.5	2264	77.8	2295	80.1				
14000	7106	2199	80.6	2236	84.0	2271	87.1	2306	90.3										
15750	7994	2285	93.3																

Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.



**Wheel Diameter** - 36-1/2 in.  
**Wheel Type** - Backward Inclined Flat Blade  
**Tip Speed FPM** - 9.56 x RPM  
**Typical BHP** = 10.4 (RPM/1000)<sup>3</sup>  
**Inlet Area** = 2.32 sq. ft. inside area

**Outlet Area** = 2.41 sq. ft. inside area  
**Outlet Velocity (FPM)** = CFM/2.41  
**Max. Motor Frame** - 326T (Arr. 9 & 10)  
**Approx. Ship Wt.** - 1485 lbs. (SD Arr. 1)



Maximum Speeds	
Standard Duty	1256
Heavy Duty	2093

## 210 MHA

CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2250	933	387	.54																
4500	1867	477	1.41	599	2.44	689	3.29	775	4.33										
6750	2800	574	2.74	688	4.27	788	6.12	864	7.56	930	8.86	990	10.1	1048	11.5	1105	12.9	1162	14.6
9000	3734	686	4.91	786	6.93	871	8.85	954	11.3	1028	13.7	1091	15.9	1147	17.8	1198	19.5	1245	21.2
11250	4668	812	8.27	893	10.7	973	13.2	1043	15.6	1110	18.2	1176	21.2	1239	24.4	1295	27.4	1346	30.1
13500	5601	944	13.1	1012	15.8	1079	18.8	1147	21.9	1209	24.8	1265	27.6	1321	30.7	1376	34.2	1430	38.0
15750	6535	1078	19.7	1139	22.8	1196	26.1	1254	29.5	1313	33.2	1369	36.7	1420	40.0	1468	43.3	1516	46.8
18000	7468	1213	28.3	1270	31.9	1321	35.4	1371	39.2	1422	43.2	1474	47.3	1524	51.4	1572	55.4	1617	59.2
20250	8402	1350	39.3	1403	43.3	1451	47.3	1496	51.4	1540	55.6	1585	60.0	1631	64.6	1677	69.3	1721	73.9
22500	9336	1489	52.9	1538	57.3	1582	61.7	1624	66.1	1665	70.8	1704	75.4	1745	80.4	1786	85.4	1827	90.5
24750	10269	1626	69.1	1673	74.2	1716	79.1	1755	83.9	1793	88.9	1829	93.9	1865	99.0	1902	104	1938	110
27000	11203	1768	89.1	1809	94.2	1850	99.7	1888	105	1923	110	1957	116	1991	121	2024	127	2057	132
29250	12136	1908	112	1947	118	1984	124	2020	129	2055	135	2087	141						
31500	13070	2048	139	2086	145														

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6750	2800	1219	16.4																
9000	3734	1291	22.9	1335	24.6	1378	26.3	1421	28.2	1464	30.2	1507	32.3	1550	34.6	1593	37.0	1635	39.5
11250	4668	1393	32.5	1436	34.8	1477	37.0	1517	39.2	1554	41.2	1591	43.3	1627	45.5	1662	47.6	1697	49.8
13500	5601	1482	41.8	1531	45.6	1575	48.9	1617	52.1	1656	55.0	1693	57.8	1729	60.6	1763	63.2	1796	65.8
15750	6535	1563	50.6	1610	54.7	1657	59.2	1703	63.8	1746	68.2	1787	72.4	1826	76.5	1862	80.2	1897	83.8
18000	7468	1659	62.9	1701	66.8	1742	70.8	1783	75.1	1825	79.9	1866	84.8	1907	90.0	1947	95.3	1985	100
20250	8402	1763	78.3	1803	82.6	1842	86.9	1879	91.0	1916	95.4	1953	100	1990	105	2027	110	2064	115
22500	9336	1868	95.7	1908	101	1946	106	1983	111	2018	115	2053	120	2087	125				
24750	10269	1976	115	2014	121	2051	127	2087	132										

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9000	3734	1676	41.9																
11250	4668	1731	52.0	1765	54.3	1799	56.7	1834	59.3	1868	61.9	1903	64.7	1937	67.6	1972	70.6	2006	73.6
13500	5601	1829	68.4	1860	70.9	1891	73.4	1921	75.9	1951	78.4	1980	80.9	2009	83.5	2038	86.1	2067	88.8
15750	6535	1930	87.2	1962	90.5	1993	93.7	2024	96.9	2053	100	2082	103						
18000	7468	2021	105	2056	110	2090	115												

Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

# 230 MHA Data

Wheel Diameter - 40 in.

Wheel Type - Backward Inclined Flat Blade

Tip Speed FPM = 10.47 x RPM

Typical BHP = 16.3 (RPM/1000)<sup>3</sup>

Inlet Area - 2.80 sq. ft. inside area

Outlet Area - 2.89 sq. ft. inside area

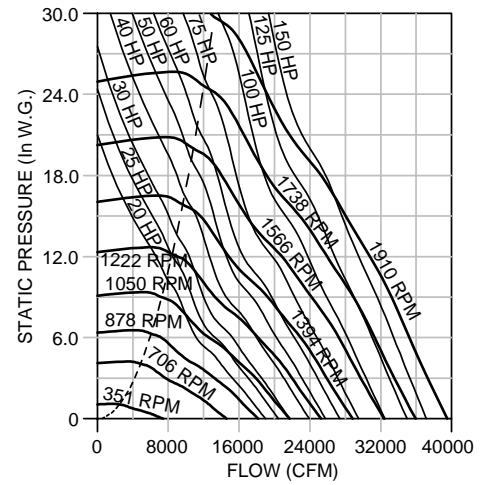
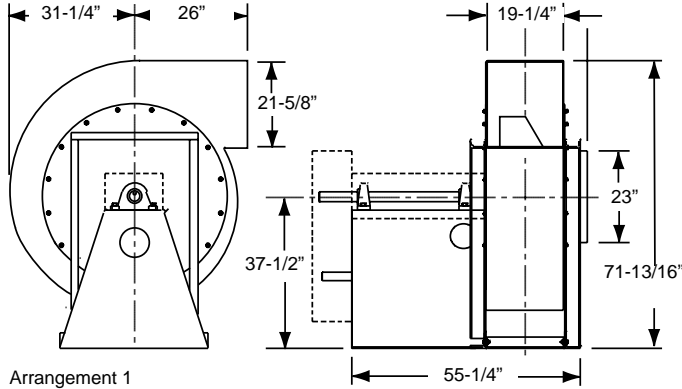
Outlet Velocity (FPM) = CFM/2.89

Max. Motor Frame - 326T (Arr. 9 & 10)

Approx. Ship Wt. - 1808 lbs. (SD Arr. 1)

## Maximum Speeds

Standard Duty
1146
Heavy Duty
1910



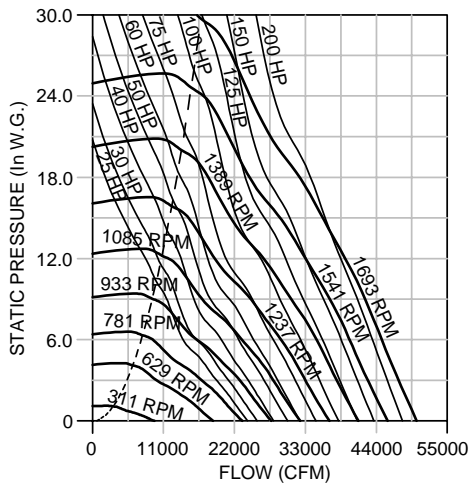
## 230 MHA

CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2500	862	351	.61																
5000	1724	424	1.54	532	2.58	618	3.59	702	4.89										
7500	2586	502	2.84	612	4.69	699	6.54	768	8.04	828	9.43	885	10.9	941	12.5	998	14.5	1053	16.5
10000	3448	593	4.97	689	7.20	771	9.52	849	12.4	913	14.8	969	16.9	1018	18.8	1065	20.7	1109	22.6
12500	4310	697	8.23	777	11.0	852	13.7	918	16.4	984	19.7	1046	23.2	1102	26.6	1150	29.4	1195	32.1
15000	5172	807	12.9	873	16.0	941	19.4	1004	22.7	1061	25.9	1115	29.2	1170	33.2	1223	37.4	1273	41.6
17500	6034	919	19.2	978	22.7	1035	26.5	1093	30.4	1148	34.3	1199	38.1	1247	41.8	1293	45.7	1340	50.1
20000	6896	1032	27.5	1087	31.4	1137	35.5	1186	39.8	1237	44.3	1287	48.9	1334	53.3	1377	57.5	1419	61.7
22500	7758	1148	38.0	1199	42.5	1244	46.9	1288	51.6	1332	56.4	1377	61.5	1422	66.6	1465	71.7	1506	76.6
25000	8620	1264	51.0	1311	55.9	1354	60.8	1394	65.8	1433	71.0	1473	76.4	1513	81.9	1554	87.7	1594	93.4
27500	9482	1380	66.6	1425	72.1	1466	77.6	1503	83.0	1539	88.5	1575	94.3	1611	100	1648	106	1685	113
30000	10344	1497	85.3	1540	91.5	1578	97.3	1614	103	1648	109	1681	115	1713	121	1746	128	1779	134
32500	11206	1616	108	1654	114	1692	121	1726	127	1758	133	1789	140	1820	146	1850	153	1880	160
35000	12068	1735	133	1771	140	1805	147	1838	154	1869	161	1899	168						
37500	12931	1853	163	1888	170														

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
10000	3448	1152	24.5	1194	26.5	1236	28.7	1279	31.1	1322	33.8	1364	36.5	1404	39.1				
12500	4310	1236	34.5	1275	36.9	1313	39.3	1349	41.6	1384	43.9	1418	46.3	1453	48.8	1486	51.3	1520	54.0
15000	5172	1318	45.5	1360	49.1	1399	52.4	1435	55.5	1470	58.5	1503	61.4	1536	64.3	1567	67.1	1597	69.8
17500	6034	1387	55.0	1432	60.0	1475	64.9	1515	69.6	1552	73.9	1588	78.1	1621	82.0	1653	85.7	1684	89.3
20000	6896	1460	66.2	1501	71.0	1541	76.0	1582	81.6	1622	87.4	1661	93.2	1697	98.7	1732	104	1765	109
22500	7758	1545	81.3	1582	86.0	1619	90.9	1655	96.0	1691	101	1727	107	1764	114	1800	120	1835	126
25000	8620	1633	99.1	1669	104	1705	110	1739	115	1772	120	1804	126	1837	131	1870	137	1902	144
27500	9482	1722	119	1758	125	1793	131	1826	137	1858	143	1890	149						
30000	10344	1814	141	1848	148	1881	155												

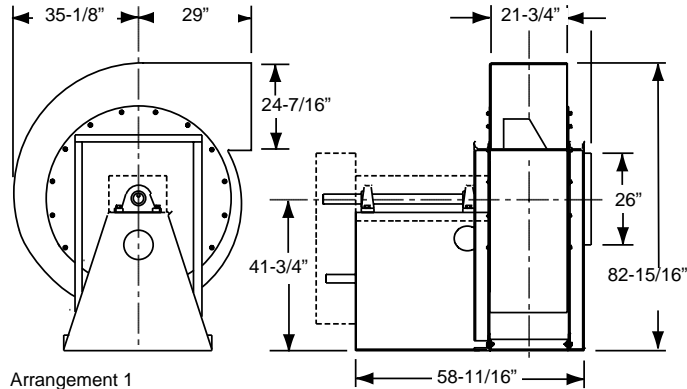
CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
12500	4310	1554	56.8	1588	59.8	1622	63.0	1656	66.3	1690	69.7	1723	73.1	1755	76.4				
15000	5172	1627	72.7	1656	75.4	1685	78.3	1713	81.1	1742	84.2	1770	87.2	1798	90.3	1826	93.5	1855	97.0
17500	6034	1713	92.7	1742	96.1	1770	99.5	1798	103	1824	106	1851	109	1876	113	1902	116		
20000	6896	1796	114	1826	118	1855	123	1883	127										
22500	7758	1869	133	1901	139														

Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.



**Wheel Diameter** - 45-1/8 in.  
**Wheel Type** - Backward Inclined Flat Blade  
**Tip Speed FPM** - 11.81 x RPM  
**Typical BHP** = 30.2 (RPM/1000)<sup>3</sup>  
**Inlet Area** = 3.59 sq. ft. inside area

**Outlet Area** = 3.69 sq. ft. inside area  
**Outlet Velocity (FPM)** = CFM/3.69  
**Max. Motor Frame** - 326T (Arr. 9 & 10)  
**Approx. Ship Wt.** - 2372 lbs. (SD Arr. 1)



Maximum Speeds	
Standard Duty	1016
Heavy Duty	1693

## 260 MHA

CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3200	867	311	.78																
6400	1734	377	1.98	473	3.32	549	4.61	623	6.26										
9600	2601	446	3.64	543	5.99	621	8.40	682	10.3	735	12.1	786	14.0	835	16.1	886	18.5	934	21.1
12800	3468	528	6.42	612	9.23	685	12.2	754	15.8	811	19.0	860	21.7	905	24.2	946	26.6	985	29.0
16000	4336	621	10.6	691	14.1	758	17.7	816	21.1	874	25.2	929	29.7	978	34.0	1022	37.8	1061	41.1
19200	5203	719	16.7	777	20.6	837	24.9	893	29.2	943	33.2	991	37.5	1039	42.5	1086	47.9	1131	53.4
22400	6070	819	24.9	871	29.3	921	34.1	972	39.2	1021	44.2	1066	48.9	1108	53.6	1149	58.6	1191	64.3
25600	6937	920	35.5	968	40.6	1012	45.8	1056	51.3	1101	57.2	1145	63.0	1186	68.6	1225	74.0	1261	79.3
28800	7804	1023	49.1	1068	54.8	1108	60.5	1146	66.4	1185	72.6	1225	79.1	1265	85.8	1303	92.2	1339	98.5
32000	8672	1126	65.8	1168	72.2	1206	78.5	1241	84.9	1276	91.6	1311	98.4	1347	106	1382	113	1418	120
35200	9539	1230	86.1	1269	93.1	1306	100	1339	107	1371	114	1402	122	1434	129	1466	137	1499	145
38400	10406	1334	110	1372	118	1405	126	1438	133	1467	141	1497	149	1525	156	1554	165	1584	173
41600	11273	1441	139	1474	147	1507	156	1538	164	1566	172	1593	180	1620	189	1647	197	1673	206
44800	12140	1547	173	1578	181	1608	190	1637	199	1665	208	1691	216						
48000	13008	1652	211	1682	220														

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
12800	3468	1023	31.4	1060	34.0	1097	36.8	1135	39.9	1172	43.1	1210	46.6	1246	50.1				
16000	4336	1098	44.3	1133	47.4	1166	50.4	1198	53.4	1229	56.4	1260	59.5	1290	62.6	1319	65.7	1349	69.2
19200	5203	1171	58.4	1208	63.0	1243	67.3	1275	71.3	1306	75.2	1336	79.0	1364	82.5	1392	86.2	1419	89.8
22400	6070	1232	70.5	1272	76.9	1310	83.2	1346	89.3	1379	94.9	1410	100	1440	105	1468	110	1496	115
25600	6937	1298	85.1	1333	90.9	1369	97.5	1405	105	1441	112	1475	119	1508	127	1539	134	1568	140
28800	7804	1374	105	1407	111	1439	117	1471	123	1503	130	1535	138	1567	145	1599	154	1630	162
32000	8672	1452	127	1484	134	1516	141	1546	148	1575	155	1604	162	1633	169	1661	176	1690	184
35200	9539	1531	153	1563	161	1594	169	1624	177	1653	184	1680	191						
38400	10406	1614	182	1644	191	1673	199												

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
16000	4336	1379	72.8	1409	76.6	1439	80.6	1469	84.7	1499	89.0	1528	93.3	1557	97.7	1585	102		
19200	5203	1445	93.3	1471	96.9	1496	100	1521	104	1547	108	1571	112	1596	116	1621	120	1646	124
22400	6070	1522	119	1548	124	1573	128	1597	132	1621	136	1644	141	1667	145	1689	149		
25600	6937	1596	146	1623	152	1648	158	1673	163										
28800	7804	1660	170	1689	178														

Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

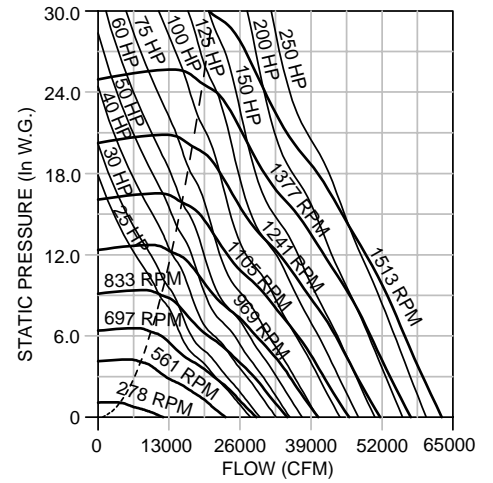
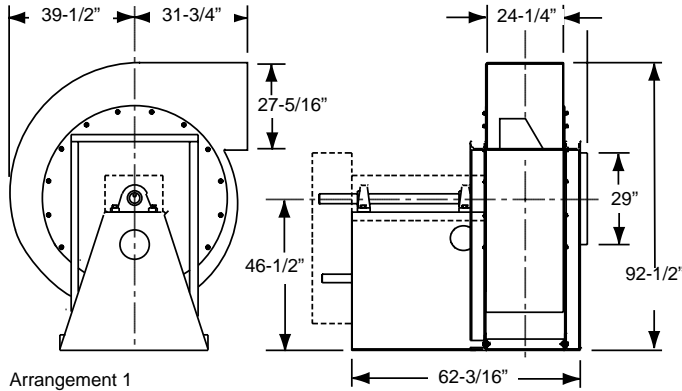
# 290 MHA Data

Wheel Diameter - 50-1/2 in.  
 Wheel Type - Backward Inclined Flat Blade  
 Tip Speed FPM = 13.22 x RPM  
 Typical BHP = 52.1 (RPM/1000)<sup>3</sup>  
 Inlet Area - 4.47 sq. ft. inside area

Outlet Area - 4.60 sq. ft. inside area  
 Outlet Velocity (FPM) = CFM/4.60  
 Max. Motor Frame - 326T (Arr. 9 & 10)  
 Approx. Ship Wt. - 2947 lbs. (SD Arr. 1)

## Maximum Speeds

Standard Duty
908
Heavy Duty
1513



## 290 MHA

CFM	OV	1" SP		2" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
4000	865	278	.98																
8000	1731	337	2.48	422	4.14	490	5.75	556	7.80										
12000	2597	398	4.54	485	7.49	555	10.5	609	12.9	657	15.1	702	17.5	746	20.1	791	23.1	835	26.4
16000	3463	471	7.99	547	11.6	611	15.2	673	19.8	724	23.7	768	27.1	808	30.2	845	33.2	879	36.1
20000	4329	554	13.3	617	17.6	676	22.0	729	26.4	780	31.4	830	37.2	874	42.5	912	47.1	948	51.5
24000	5194	641	20.7	693	25.6	747	31.1	797	36.4	842	41.5	885	46.9	928	53.1	970	59.9	1010	66.8
28000	6060	730	30.9	777	36.5	822	42.5	867	48.8	911	55.1	952	61.2	989	66.9	1026	73.2	1063	80.3
32000	6926	821	44.3	864	50.6	903	57.1	942	64.0	982	71.2	1022	78.6	1059	85.7	1093	92.3	1126	99.0
36000	7792	912	61.1	953	68.4	989	75.6	1023	82.9	1058	90.7	1094	98.9	1129	107	1163	115	1195	123
40000	8658	1005	82.2	1042	90	1076	97.9	1107	106	1138	114	1170	123	1202	132	1234	141	1266	150
44000	9523	1097	107	1132	116	1165	125	1195	134	1223	142	1251	152	1279	161	1308	171	1338	181
48000	10389	1190	137	1224	147	1254	157	1283	166	1309	176	1335	185	1361	195	1387	206	1413	216
52000	11255	1285	173	1315	184	1344	194	1372	204	1397	214	1422	225	1446	235	1469	246	1493	257
56000	12121	1380	215	1407	225	1435	237	1461	248	1485	259	1509	270						

CFM	OV	10" SP		11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP		18" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
16000	3463	913	39.2	947	42.5	980	46.0	1014	49.9	1047	53.9	1080	58.1	1113	62.6				
20000	4329	981	55.5	1012	59.3	1041	62.9	1070	66.7	1098	70.5	1125	74.2	1152	78.2	1178	82.1	1205	86.5
24000	5194	1046	73.0	1079	78.7	1109	83.9	1138	88.9	1166	93.8	1193	98.6	1218	103	1243	108	1267	112
28000	6060	1100	88.0	1136	96.1	1170	104	1202	112	1231	118	1259	125	1286	132	1311	137	1335	143
32000	6926	1158	106	1191	114	1223	122	1255	131	1287	140	1317	149	1346	158	1374	167	1400	175
36000	7792	1226	131	1256	138	1284	146	1313	154	1342	163	1370	172	1399	182	1427	192	1455	202
40000	8658	1296	159	1325	168	1353	176	1380	185	1406	193	1432	202	1458	211	1483	220	1509	230
44000	9523	1367	191	1395	201	1423	211	1449	220	1475	230	1500	239						
48000	10389	1440	227	1467	238	1494	249												

CFM	OV	19" SP		20" SP		21" SP		22" SP		23" SP		24" SP		25" SP		26" SP		27" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
20000	4329	1232	91.0	1259	95.8	1286	101	1312	106	1339	111	1365	117	1391	122	1416	128		
24000	5194	1290	116	1313	121	1336	125	1359	130	1381	135	1403	140	1426	145	1448	150	1470	155
28000	6060	1359	149	1382	154	1404	160	1426	165	1447	170	1468	175	1488	180	1508	186		
32000	6926	1425	183	1449	190	1472	197	1494	204										
36000	7792	1482	213	1508	223														

Performance shown is for installation type B: free inlet, ducted outlet. Power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

## 70 MHA

RPM	SP	Sound Power re 10 <sup>-12</sup> Watts								
		Octave Bands								
		1	2	3	4	5	6	7	8	L <sub>wi</sub> A
1400	1	68	68	66	65	63	58	51	44	67
1600	1	72	73	71	70	68	64	57	49	72
1800	1	77	77	76	74	72	69	63	55	77
	2	76	76	73	73	69	64	59	53	74
2000	1	81	81	80	78	75	73	67	60	81
	2	79	79	77	75	73	69	63	55	78
2200	1	84	84	84	82	78	76	71	64	84
	3	83	82	80	78	75	70	65	59	80
2400	1	87	87	87	85	81	79	75	67	87
	3	85	84	83	81	78	74	68	61	83
2600	1	90	89	89	87	84	81	77	70	89
	4	88	87	85	83	80	75	70	64	85
2800	1	93	92	91	90	86	84	80	72	92
	5	91	89	88	85	82	77	72	66	87
3000	1	95	94	93	92	88	85	83	74	94
	6	93	92	90	86	84	78	73	68	89
3200	1	97	96	95	94	90	87	85	76	96
	4	96	92	92	90	87	84	80	72	92
	7	95	94	93	88	87	80	75	70	91
3400	1	98	98	97	96	91	89	88	78	98
	4	98	95	95	93	89	86	82	75	95
	7	97	95	94	90	88	83	78	72	93
3600	2	99	99	98	97	93	89	87	80	99
	5	99	96	96	94	90	87	83	76	96
	8	98	97	96	92	90	84	80	74	95
3800	3	100	100	99	98	94	90	88	82	100
	6	99	98	97	95	91	88	84	77	97
	9	99	99	98	94	91	86	81	75	96
4000	3	101	102	101	100	96	92	89	84	102
	7	100	100	98	96	92	89	85	78	98
	11	99	101	99	95	93	87	81	76	98
4200	4	102	103	102	101	97	93	90	84	102
	8	101	101	100	97	94	90	86	80	99
	12	100	102	101	97	94	89	83	78	99
4400	5	103	104	103	102	98	94	91	85	103
	9	102	103	101	99	95	91	88	81	101
	13	101	104	102	99	95	90	84	79	101
4600	6	103	106	104	103	99	95	91	86	104
	10	103	104	102	100	96	93	89	83	102
	14	102	105	103	100	96	92	86	81	102
4800	8	104	107	105	103	99	95	92	86	105
	12	103	106	104	101	97	94	89	83	103
	16	102	106	105	102	97	93	87	82	103
5200	10	105	109	107	105	101	97	93	88	107
	14	104	109	106	104	100	96	91	86	106
	18	104	109	107	104	99	96	89	84	106
5600	13	106	112	108	107	102	98	95	90	108
	17	106	111	108	106	102	98	93	88	108
	21	105	111	109	107	101	98	92	86	108
6000	17	107	114	110	109	104	100	96	91	110
	21	107	114	111	109	103	100	95	90	110
	25	106	113	112	109	103	100	93	88	110

## 90 MHA

RPM	SP	Sound Power re 10 <sup>-12</sup> Watts								
		Octave Bands								
		1	2	3	4	5	6	7	8	L <sub>wi</sub> A
1200	1	73	72	71	70	67	62	54	46	72
1400	1	78	79	77	75	73	69	62	54	78
1600	1	83	84	83	80	77	75	68	60	83
	1	87	88	87	84	81	79	73	66	87
1800	2	85	85	84	81	79	76	68	61	84
	1	91	91	90	87	84	82	76	68	90
2000	2	90	89	88	86	82	80	73	66	88
	1	94	94	93	90	87	85	79	71	93
2200	3	92	91	90	87	84	81	75	67	90
	1	97	96	96	93	90	88	83	74	96
2400	3	96	94	93	91	87	84	79	72	93
	1	100	99	98	96	92	90	86	76	98
2600	4	98	96	95	93	89	86	81	73	95
	1	102	101	100	98	94	92	88	78	100
2800	5	101	98	97	94	91	87	83	75	96
	1	104	104	102	100	96	94	91	81	102
3000	6	103	100	99	96	92	89	85	77	98
	1	106	106	104	102	98	95	94	83	104
3200	4	106	103	103	101	96	93	90	83	102
	7	105	101	101	98	94	91	87	79	100
	1	108	108	106	104	99	97	96	85	106
3400	4	108	106	105	103	98	95	92	85	105
	7	107	104	103	100	96	93	89	82	102
	2	109	109	107	105	101	98	96	88	107
3600	5	109	107	106	104	100	96	93	87	106
	8	108	106	105	102	98	94	91	84	104
	3	110	110	109	107	102	99	97	89	109
3800	6	109	109	108	106	101	97	94	88	107
	9	109	108	106	104	99	96	92	85	105
	3	111	112	110	108	104	100	98	91	110
4000	7	110	110	109	107	102	98	96	89	109
	11	110	109	107	104	100	97	93	86	106
	3	111	114	112	110	105	102	100	93	112
4200	6	111	113	111	109	105	100	98	92	111
	9	111	112	110	108	103	99	96	90	109
	12	111	111	109	106	102	98	94	88	108
4400	4	112	115	113	111	107	103	100	95	113
	7	112	114	112	111	106	102	99	93	112
	10	112	113	111	109	105	101	97	91	111
	13	111	112	110	108	103	99	96	89	109
4600	5	113	116	114	112	108	104	101	96	114
	8	113	115	114	112	107	103	100	95	113
	11	112	115	113	110	106	102	98	93	112
	14	112	114	112	109	105	101	97	91	111
4800	7	114	117	115	114	109	104	101	97	115
	10	113	117	114	112	108	103	100	95	114
	13	113	116	113	111	107	103	99	94	113
	16	113	115	113	110	106	102	98	92	112

The sound power level ratings shown are in decibels referred to 10<sup>-12</sup> watts calculated per AMCA Standard 301. The A-weighted sound ratings shown have been calculated per AMCA Standard 301. Values shown are for inlet L<sub>wi</sub> and inlet L<sub>wi</sub>A sound power levels for installation type B: free inlet, ducted outlet. Ratings do not include the effects of duct end correction.



# 110 - 130 MHA Sound Data

## 110 MHA

RPM	SP	Sound Power re 10 <sup>-12</sup> Watts								
		Octave Bands								L <sub>wi</sub> A
		1	2	3	4	5	6	7	8	
800	1	68	64	62	59	56	50	42	35	61
1000	1	75	75	72	69	67	63	56	49	72
1200	1	80	82	79	76	73	70	64	57	79
	2	79	79	75	72	69	64	58	50	74
1400	1	84	87	85	81	78	75	70	63	84
	3	83	84	79	76	72	68	61	54	78
1600	1	87	91	89	85	82	80	75	68	88
	4	87	89	83	79	75	71	65	58	82
1800	1	89	94	92	89	86	83	79	72	92
	5	89	92	87	83	79	75	69	62	85
2000	1	90	97	96	92	89	86	83	76	95
	6	91	95	91	87	82	78	73	66	89
	1	92	99	99	95	91	89	85	79	98
2200	4	92	98	97	94	89	86	82	75	96
	7	92	97	95	90	85	81	76	69	92
2400	2	94	100	101	98	93	90	87	81	100
	5	94	100	100	96	91	87	84	78	98
	8	94	99	98	93	88	84	80	73	95
2600	2	95	102	104	100	96	93	90	84	102
	5	95	102	103	99	94	90	87	81	101
	8	95	101	101	97	92	87	84	78	99
	11	96	102	100	94	89	84	80	73	96
2800	2	96	104	106	102	98	95	92	87	104
	5	97	104	106	102	97	93	90	84	103
	8	96	103	104	100	95	90	87	82	102
	11	97	103	103	98	92	88	84	78	100
3000	4	98	105	108	104	99	96	93	88	106
	7	98	105	107	104	98	94	91	86	105
	10	97	105	106	102	97	92	89	83	103
	13	98	105	105	100	94	90	86	80	102
3200	6	99	107	110	106	101	96	94	89	108
	9	99	107	109	105	100	95	92	87	106
	12	98	106	108	104	98	93	90	85	105
	15	99	107	108	102	96	91	87	82	104
3400	8	100	108	111	108	102	97	95	90	109
	11	100	108	110	107	101	96	93	88	108
	14	100	108	110	105	100	94	91	86	107
	17	100	108	110	103	98	93	89	83	106
3600	11	101	109	112	109	103	98	96	91	110
	14	100	108	111	108	102	97	94	89	109
	17	101	109	111	106	101	95	92	87	108
	20	101	109	111	105	99	94	90	84	107
3800	13	102	110	113	110	105	99	97	92	111
	16	101	109	112	109	104	98	95	91	110
	19	102	110	112	108	102	97	93	88	109
	22	102	110	113	107	101	96	92	86	109

## 130 MHA

RPM	SP	Sound Power re 10 <sup>-12</sup> Watts								
		Octave Bands								L <sub>wi</sub> A
		1	2	3	4	5	6	7	8	
800	1	75	74	71	67	65	60	53	46	70
1000	1	82	82	79	76	74	70	63	56	79
	2	81	79	75	72	69	64	57	49	74
1200	1	87	88	86	82	79	76	70	63	85
	3	86	85	81	77	73	69	62	54	79
1400	1	90	93	91	87	84	81	76	69	90
	4	90	90	86	82	77	73	67	60	84
1600	1	93	98	95	91	88	86	81	73	94
	5	93	95	90	86	81	78	72	65	88
1800	1	95	101	98	95	91	89	85	77	97
	4	95	99	97	93	88	85	81	74	95
	7	96	98	93	88	84	80	74	67	91
2000	1	97	103	102	98	94	92	88	81	100
	5	97	101	100	96	91	88	84	77	98
	9	98	101	97	91	87	82	77	69	94
2200	2	98	105	105	101	96	94	90	84	103
	6	99	104	103	99	94	90	86	80	101
	10	99	103	101	95	90	86	81	74	98
2400	4	100	107	107	103	98	95	91	85	105
	7	100	106	106	102	96	93	89	83	103
	10	100	105	104	100	94	90	86	80	101
	13	101	106	103	97	92	87	82	75	100
2600	6	102	109	109	105	100	96	93	87	107
	9	101	108	108	104	98	94	91	85	105
	12	101	107	107	102	96	92	88	82	104
	15	102	108	106	100	94	90	85	78	102
2800	8	103	110	111	107	102	97	94	89	109
	11	103	109	110	106	100	96	93	87	107
	14	103	109	109	104	99	94	90	84	106
	17	103	110	109	102	97	92	88	81	105
3000	11	104	111	113	109	103	98	95	90	110
	14	104	111	112	108	102	97	94	88	109
	17	104	111	111	106	100	95	92	86	108
	20	105	112	111	104	98	94	89	83	107
3200	13	105	113	114	111	105	100	97	92	112
	16	105	112	114	110	104	98	96	90	111
	19	105	113	114	108	102	97	94	88	110
	22	106	113	114	107	101	96	92	86	109

The sound power level ratings shown are in decibels referred to 10<sup>-12</sup> watts calculated per AMCA Standard 301. The A-weighted sound ratings shown have been calculated per AMCA Standard 301. Values shown are for inlet L<sub>wi</sub> and inlet L<sub>wi</sub>A sound power levels for installation type B: free inlet, ducted outlet. Ratings do not include the effects of duct end correction.

# Data **Sound MHA 150 - 170**

## 150 MHA

RPM	SP	Sound Power re $10^{-12}$ Watts								
		Octave Bands								
		1	2	3	4	5	6	7	8	$L_{wi}A$
600	1	70	67	65	62	58	51	43	36	63
800	1	81	80	77	74	72	67	60	53	76
1000	1	88	88	85	82	79	75	69	61	84
	3	86	83	79	75	72	66	59	51	78
1200	1	92	94	91	87	84	81	75	68	90
	4	91	90	86	82	77	73	66	59	84
1400	1	95	99	96	92	89	86	81	73	95
	5	95	96	91	87	82	79	73	65	89
1600	1	98	103	100	96	93	90	86	78	99
	4	98	101	99	94	89	87	82	75	96
	7	98	100	95	90	85	82	76	68	93
1800	3	101	105	103	99	94	92	87	80	101
	6	100	104	102	97	92	89	84	77	99
	9	101	104	99	94	89	85	79	72	96
2000	3	103	108	106	102	98	95	91	84	104
	6	103	107	106	101	96	93	88	82	103
	9	102	106	104	99	93	90	85	79	101
	12	103	106	102	96	91	87	81	74	99
2200	5	105	110	109	105	100	97	93	87	107
	8	104	109	108	104	98	95	91	85	105
	11	104	109	107	102	96	92	88	82	104
	14	105	109	105	99	94	90	85	78	102
2400	8	106	112	111	107	101	98	94	88	109
	11	105	111	110	106	100	96	92	86	107
	14	106	111	109	104	98	94	90	83	106
	17	106	111	108	102	96	92	87	80	104
2600	11	107	113	113	109	103	99	96	90	110
	14	107	113	112	108	102	98	94	88	109
	17	107	113	112	106	100	96	92	86	108
	20	107	113	111	104	99	94	89	83	107
2800	13	108	115	115	111	105	101	98	92	113
	16	108	114	115	110	104	100	96	91	112
	20	108	115	114	108	102	98	94	88	110
	23	109	115	114	107	101	96	92	85	109

## 170 MHA

RPM	SP	Sound Power re $10^{-12}$ Watts								
		Octave Bands								
		1	2	3	4	5	6	7	8	$L_{wi}A$
700	1	82	80	77	74	71	66	59	52	76
900	1	90	89	86	83	80	76	69	62	85
	3	88	84	80	77	73	67	60	52	79
1100	1	95	96	92	89	86	83	77	69	92
	4	94	92	88	84	80	75	69	61	86
1300	1	99	101	98	94	91	88	83	75	97
	6	98	97	92	88	84	79	73	65	90
1500	2	102	105	102	98	94	91	86	79	100
	5	101	104	100	96	91	88	83	76	98
	8	102	102	97	92	87	84	77	70	95
1700	2	104	109	106	101	98	95	91	83	104
	5	105	108	105	100	95	93	88	81	103
	8	104	107	103	98	93	90	85	78	100
	11	105	107	100	95	90	86	80	73	98
1900	5	107	111	109	104	99	97	92	86	107
	8	106	110	108	103	97	95	90	83	105
	11	106	109	106	101	95	92	87	80	103
	14	107	110	104	98	93	89	83	76	101
2100	8	108	113	111	107	101	98	94	88	109
	11	108	112	110	105	100	96	92	86	107
	14	108	112	109	104	98	94	90	83	106
	17	109	112	108	101	96	92	87	79	104
2300	11	110	115	114	109	103	100	96	90	111
	14	109	114	113	108	102	98	94	88	110
	17	110	114	112	106	101	97	92	85	108
	20	110	115	111	105	99	95	90	83	107
2500	16	111	116	115	111	105	101	97	91	112
	20	111	116	115	109	103	99	95	88	111
	24	112	117	114	107	101	97	92	85	110

The sound power level ratings shown are in decibels referred to  $10^{-12}$  watts calculated per AMCA Standard 301. The A-weighted sound ratings shown have been calculated per AMCA Standard 301. Values shown are for inlet  $L_{wi}$  and inlet  $L_{wi}A$  sound power levels for installation type B: free inlet, ducted outlet. Ratings do not include the effects of duct end correction.

# 190 - 210 MHA Sound Data

## 190 MHA

RPM	SP	Sound Power re $10^{-12}$ Watts									
		Octave Bands									$L_{wi}A$
		1	2	3	4	5	6	7	8		
500	1	71	69	66	64	61	58	55	52	67	
700	1	82	82	80	78	75	71	67	63	80	
	2	80	80	76	73	70	67	64	61	76	
900	1	91	90	88	86	83	79	75	71	88	
	4	88	87	81	77	74	72	69	66	81	
1100	2	96	95	93	90	88	84	80	76	93	
	4	95	93	91	87	84	80	77	74	90	
	6	94	92	88	83	80	77	74	71	87	
1300	3	100	100	98	95	92	88	84	80	97	
	6	100	98	96	91	88	84	81	78	94	
	9	100	97	94	87	83	80	78	75	91	
1500	4	104	104	102	98	95	92	88	84	101	
	6	105	103	101	97	93	90	86	83	100	
	8	105	102	100	95	91	88	84	81	98	
	10	105	102	100	93	89	86	83	80	97	
1700	6	107	108	105	101	98	95	91	87	104	
	9	108	107	104	100	96	93	89	86	102	
	12	108	106	103	98	93	90	87	84	101	
	15	107	105	103	95	91	87	85	82	99	
1900	10	110	110	108	104	100	96	93	89	106	
	13	110	110	107	102	98	95	91	88	105	
	16	110	109	106	101	96	92	89	86	103	
	19	109	109	106	99	93	90	88	85	102	
2100	15	112	113	110	106	101	98	94	91	108	
	18	112	113	109	105	99	96	93	89	107	
	21	111	112	109	103	98	94	91	88	106	
	24	111	112	109	102	96	92	90	87	105	

## 210 MHA

RPM	SP	Sound Power re $10^{-12}$ Watts									
		Octave Bands									$L_{wi}A$
		1	2	3	4	5	6	7	8		
400	1	68	63	61	59	56	54	51	48	62	
600	1	81	81	79	76	73	69	66	62	79	
	2	79	78	73	71	68	65	62	59	74	
800	1	91	91	88	86	83	79	75	71	88	
	4	88	87	80	77	74	72	69	66	80	
1000	1	98	98	95	92	90	86	82	78	95	
	2	97	96	94	91	88	85	81	77	94	
	4	96	94	91	88	85	81	78	74	90	
1200	6	95	93	88	84	80	78	75	72	87	
	3	102	101	99	96	93	89	85	81	99	
	5	102	100	98	94	90	87	83	80	96	
	7	101	99	96	91	88	84	81	78	94	
1400	9	101	98	95	88	85	82	79	76	92	
	3	107	107	105	100	97	95	91	87	103	
	6	106	105	103	98	95	92	88	84	101	
1600	9	107	104	101	96	92	89	85	82	99	
	12	106	103	100	93	89	86	83	80	97	
	8	110	109	107	102	99	95	91	88	105	
1800	11	111	108	105	100	96	93	89	86	103	
	14	110	107	105	98	94	91	88	85	102	
	17	110	107	104	95	91	88	86	83	100	
2000	12	113	112	109	105	101	98	94	90	107	
	15	113	112	108	103	99	96	92	89	106	
	18	112	111	108	102	97	94	91	88	105	
	21	112	111	108	100	95	92	89	87	104	
2100	17	115	115	112	107	103	99	96	92	110	
	20	114	115	111	106	101	98	94	91	109	
	23	114	114	111	105	99	96	93	90	108	
	26	114	114	111	104	98	94	92	89	107	

The sound power level ratings shown are in decibels referred to  $10^{-12}$  watts calculated per AMCA Standard 301. The A-weighted sound ratings shown have been calculated per AMCA Standard 301. Values shown are for inlet  $L_{wi}$  and inlet  $L_{wi}A$  sound power levels for installation type B: free inlet, ducted outlet. Ratings do not include the effects of duct end correction.

# Data **Sound MHA 230 - 260**

## 230 MHA

RPM	SP	Sound Power re 10 <sup>-12</sup> Watts								
		Octave Bands								L <sub>wi</sub> A
		1	2	3	4	5	6	7	8	
400	1	72	68	66	64	61	58	55	52	66
500	1	79	78	76	73	70	66	63	59	76
600	1	85	85	82	80	77	73	69	65	82
	2	83	82	78	76	72	69	66	63	78
700	1	90	90	87	85	82	78	74	70	87
	3	88	87	82	79	76	73	70	67	82
800	1	95	94	91	89	86	82	78	74	91
	4	91	91	85	82	79	76	73	70	85
900	1	98	98	95	92	90	86	82	78	95
	6	95	93	87	83	80	78	75	72	87
1000	2	101	100	97	94	91	88	84	80	97
	5	99	97	94	90	87	83	80	77	93
	8	98	96	90	85	82	79	77	74	89
1100	3	103	102	100	96	93	90	86	82	99
	6	102	100	97	93	90	86	83	80	96
	9	101	99	94	89	85	83	80	77	92
1200	3	106	105	103	99	96	93	89	85	102
	7	105	103	100	96	92	89	85	82	98
	11	104	102	97	91	87	84	82	79	95
1300	5	108	107	104	100	97	94	90	86	103
	9	108	105	102	97	93	90	87	84	100
	13	107	104	100	93	89	86	84	81	97
1400	7	110	108	106	101	98	95	91	87	104
	11	110	107	104	99	95	92	88	85	102
	15	109	106	103	95	91	88	86	83	99
1500	9	112	110	108	103	99	96	92	89	106
	13	112	109	106	100	96	93	90	87	104
	17	111	108	105	97	93	90	88	85	102
1600	12	114	111	109	104	100	97	93	90	107
	16	114	111	108	101	97	94	91	88	105
	20	113	110	108	99	94	91	89	86	103
1700	15	115	113	110	105	101	98	94	91	108
	19	115	113	109	103	98	95	92	89	106
	23	114	112	109	101	96	93	91	88	105
1800	17	116	115	111	107	102	99	95	92	109
	21	116	114	111	105	100	97	94	91	108
	25	115	114	111	103	98	95	92	89	107

## 260 MHA

RPM	SP	Sound Power re 10 <sup>-12</sup> Watts								
		Octave Bands								L <sub>wi</sub> A
		1	2	3	4	5	6	7	8	
400	1	77	74	72	70	66	63	60	57	72
500	1	84	83	81	78	75	71	67	63	81
	2	82	80	76	73	70	67	64	61	76
600	1	90	89	87	84	81	77	73	69	87
	3	87	85	81	78	75	72	69	66	81
700	1	95	95	91	89	86	82	78	74	92
	4	92	91	85	82	79	76	73	70	85
800	1	100	99	95	93	90	86	82	78	96
	6	96	95	87	84	81	78	75	72	87
900	2	102	101	98	95	92	89	85	81	98
	5	100	99	95	91	88	84	81	78	94
	8	99	97	91	86	83	81	78	75	90
1000	3	105	104	101	98	95	91	87	83	100
	6	104	102	98	95	91	88	84	81	97
	9	103	101	96	91	87	84	81	78	94
1100	4	107	106	103	100	97	93	89	85	103
	8	107	104	101	97	93	89	86	83	99
	12	106	103	98	92	88	86	83	80	96
1200	6	110	108	105	101	98	95	91	87	104
	10	109	107	103	99	95	91	88	85	101
	14	109	106	101	95	91	88	86	83	99
1300	8	112	110	107	103	100	96	92	89	106
	12	112	109	106	101	97	93	90	87	104
	16	111	108	104	97	93	90	88	85	101
1400	11	114	112	109	104	100	97	93	90	107
	15	114	111	108	102	98	95	91	88	105
	19	114	110	107	99	95	92	90	87	103
1500	14	117	114	111	106	102	98	95	91	108
	18	116	113	110	103	99	96	93	90	107
	22	116	112	109	101	97	94	91	88	105
1600	18	119	115	112	106	102	99	95	92	110
	22	118	115	112	104	100	97	94	91	108
	26	118	114	111	102	98	95	93	90	107

The sound power level ratings shown are in decibels referred to 10<sup>-12</sup> watts calculated per AMCA Standard 301. The A-weighted sound ratings shown have been calculated per AMCA Standard 301. Values shown are for inlet L<sub>wi</sub> and inlet L<sub>wi</sub>A sound power levels for installation type B: free inlet, ducted outlet. Ratings do not include the effects of duct end correction.

# 290 MHA Sound Data

## 290 MHA

RPM	SP	Sound Power re $10^{-12}$ Watts								
		Octave Bands								$L_{wA}$
		1	2	3	4	5	6	7	8	
300	1	70	67	65	62	59	57	54	51	65
400	1	82	79	77	75	71	67	64	60	77
500	1	89	88	85	83	79	75	71	67	85
	3	86	82	77	75	72	69	66	63	78
600	1	95	94	91	88	85	81	77	73	91
	4	91	89	83	80	77	75	72	69	84
700	1	100	99	95	93	90	86	82	78	95
	3	98	96	93	90	86	83	79	76	92
	5	96	94	89	85	82	79	76	73	89
800	2	103	102	98	96	93	89	85	81	98
	5	101	99	95	92	88	85	81	78	94
	8	99	98	90	86	83	81	78	75	90
900	3	106	105	101	98	95	92	88	84	101
	6	105	103	99	95	92	88	85	82	98
	9	104	102	96	91	88	85	82	79	95
1000	3	109	108	105	102	99	95	91	87	104
	6	108	106	103	99	96	92	89	85	102
	9	108	105	101	97	93	90	86	83	100
	12	107	104	99	93	90	87	84	81	97
1100	6	111	110	107	103	100	96	92	88	106
	9	111	109	105	101	97	94	90	87	104
	12	110	108	103	98	95	91	88	85	101
	15	110	107	102	95	92	89	87	84	99
1200	8	114	112	109	105	101	98	94	90	107
	11	114	111	108	103	99	96	92	89	106
	14	113	110	106	101	97	94	91	88	104
	17	113	110	105	98	95	92	89	86	102
1300	12	116	114	110	106	102	99	95	91	108
	15	116	113	109	104	100	97	93	90	107
	18	116	112	109	102	98	95	92	89	106
	21	115	112	108	100	96	93	91	88	104
1400	16	119	115	112	107	103	100	96	93	110
	19	118	115	111	105	101	98	95	92	109
	22	118	115	111	103	99	96	94	91	107
	25	118	114	110	102	98	95	93	90	106

The sound power level ratings shown are in decibels referred to  $10^{-12}$  watts calculated per AMCA Standard 301. The A-weighted sound ratings shown have been calculated per AMCA Standard 301. Values shown are for inlet  $L_{wI}$  and inlet  $L_{wIA}$  sound power levels for installation type B: free inlet, ducted outlet. Ratings do not include the effects of duct end correction.



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