



INSTALL CONFIDENCE.



**Make-up Air & Side Intake Filtered
Supply Centrifugal Fans, MAF-Series**

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BY JOHNSON CONTROLS

INTRODUCTION

Direct Drive Units

YORK® by Johnson Controls MA-Series replaces foul or contaminated air that is removed by a building's exhaust system.

Such make-up air is so essential that it is part of safety and building code requirements for commercial kitchens, chemical laboratories, electrical control rooms and where gas equipment is installed. Proper make-up air provisions should be part of every building plan.

Without adequate make-up air, air starvation can create negative pressures within a structure. Doors open with difficulty. Dirt, insects, and debris are drawn in through entrances. Fumes and odors accumulate. Pilot lights operate erratically. Moisture is sucked in through cracks in roofs and walls and around windows and doors. Air becomes stale. Backdrafts occur. Air handling systems operate ineffectively, inefficiently, and expensively. Heated or cooled air is wasted when make-up air is not properly considered.

On the other hand, uncontrolled air flow through windows and doors creates drafts; admits moisture, dust, dirt, and pollen; and lets heat escape.

The ability of the MA-Series to regulate air flow assures proper replacement air volume under varying conditions. Units can be coordinated to match the exhaust velocity required to remove fumes, vapors, and grease while providing sufficient oxygen to feed the system effectively.

Belt Drive Units

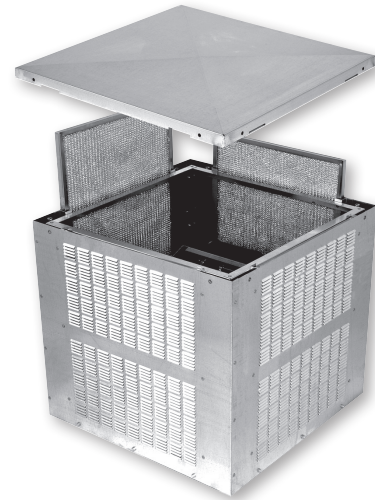
Larger belt drive models extend the range of the MA-Series. Now clean air volumes above 14,400 CFM can be supplied to replace exhausted air and fumes.

Blowers are efficient, double inlet, forward-curved design in strong, die-formed steel housings. Variable pitch pulley allows adjustment in RPM for more precise regulation of air flow. Motor, belts, pulleys and other components form a dependable, durable and quiet-operating assembly easily balanced to meet system requirements.

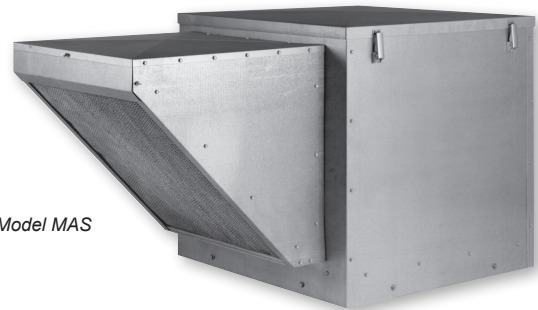
MAF Models

The housing's louvered sides permit a direct air path, giving the housing a low profile to the roof. Cleanable, permanent filters back-up each louvered side to prevent airborne contaminants from entering. Filters are easily removed for cleaning.

An integral mounting base permits easy installation on a roof curb. Roof curbs speed, simplify, and coordinate installation of roof-mounted supply and exhaust equipment. YORK® by Johnson Controls offers an extensive variety of curbs for mounting on flat and sloped roofs.



Model MAF



Model MAS

Model: MAF

- Static pressure up to 1.0" wg.
- Direct Drive - Flow capacity up to 3,730 CFM
- Belt Drive - Flow capacity up to 14,426 CFM

Model: MAS (Side Intake)

- Static pressure up to 1.5" wg.
- Belt Drive - Flow capacity up to 12,721 CFM

CERTIFICATIONS & LISTINGS



AMCA Certification

YORK® by Johnson Controls certifies that the MA-Series models shown on pages 4 through 6 (excluding MA6020) 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.



UL and cUL Certification

MA-Series fans carry the UL label, UL705 (ZACT/ZACT7), file #E477250.

FEATURES & BENEFITS

Easy Installation

The base/curb cap is free of protruding fasteners which would interfere with installation onto the curb.

Easy Maintenance Access

A full-size insulated (MAS model only) cover is easily removed via adjustable heavy duty, quick-release latches (MAS model only), providing clear access to all components. The gasket is installed in the cover, not the housing, so it is not damaged during maintenance.

Structural Integrity

The galvanized housing provides a high degree of rigidity and weather protection by bending and overlapping all seams. Additional angle reinforcement is provided along the interior base, providing stiffness to the walls and support of the unit on the curb. The housing cover is gasketed with thick closed cell neoprene and "pitched" to ensure complete rain run-off.

Motor Selection

Available in a wide range of voltages and enclosures. High quality open drip proof motors are standard. Totally enclosed, explosion proof and two speed motors are available.

Drives and Belts

Pulleys are pre-set to the specified RPM. Cast iron variable pitch pulleys are adjustable, allowing for field balancing based on actual field conditions. All pulleys are sized for at least 150% of the driven horsepower. Motors can be adjusted to maintain proper belt tension.

Conduit Entry

A large 1" dia. hole in the base provides ample room to easily run electrical power into the housing.

Internal Wiring

All direct and belt drive models with ODP motors feature a polarized disconnect plug which is factory wired from the motor to the junction box. This provides a positive method of electric shut-off as required by most codes without requiring the traditional disconnect switch. (See "Safety Disconnect Switch" for optional disconnect devices.)

Vibration Isolators

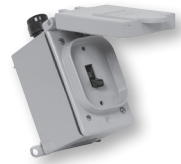
The blower housing/motor assembly uses multi-directional, rubber-in-shear isolators to mitigate residual vibrations transmission from the unit to the building.

Intake Hood (Model MAS Only)

The intake hood is sloped and properly sized for low velocity, preventing water entry. The 1" aluminum filters are washable and secured by easy to use thumb latches.

Safety Disconnect Switch

Safety disconnect switches are available to allow positive electrical shut-off and safety. Switches are factory mounted when factory wiring is requested. Wiring is only run from the motor to the junction box. (Factory wiring of explosion proof applications is not available.) A wide range of Nema rated enclosures with disconnect switches are available for indoor, outdoor, and explosion proof installations. Disconnects are to be field wired by a licensed electrician.



Speed Controllers

The Lek-Trol™ controller allows adjustment in speed to a maximum of 50% reduction, which results in a very cost effective means for system balancing. The device can be located under the motor cover to prevent unauthorized tampering or on the wall for ease of operation by the building occupants. (Available on direct drive units with ODP motors.)



Firestat Switch

Firestat switch automatically disconnects the unit when the temperature of the air being supplied exceeds a preset rating.



Dampers

Dampers are available for either counter balanced or motorized operation (motor kit optional). Dampers feature square galvanized steel frame, and multi-leaf, roll formed aluminum blades with nylon bearings.

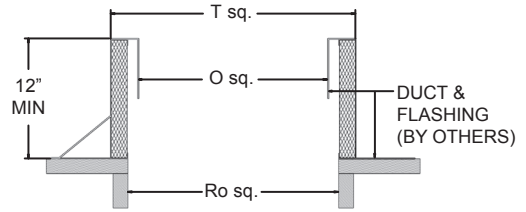
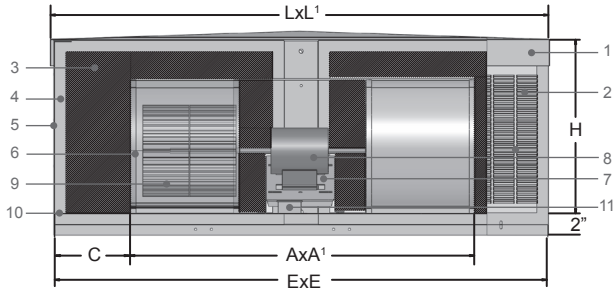
Finishes

Coatings such as Polyester Powder Coat, Epoxy Powder Coat, Phenolic Epoxy Powder Coat, and others are available. See the coatings brochure for details.



Model MAF,
Direct Drive

MAF | DIRECT DRIVE



- 1. Removable Roof Cap
- 2. Louvered Side Panels
- 3. Removable 1" Thick Cleanable Filters
- 4. Filter Track
- 5. Solid End Panels
- 6. Blower Housings with Support Bar
- 7. Motor and Blower Housing Mounting Plates
- 8. Resilient Mounted Ball Bearing Motor (Thermally Protected)
- 9. Centrifugal Blower Wheels
- 10. Integral Mounting Base
- 11. Disconnect Switch

Model	Dimensional Data							Filters		Self-Flashing Aluminum Curb			Unibeam or Field Built Curb (UNI-12)			Ship Wt. (lbs)
	L	L ¹	H	C	A	A ¹	ExE	Qty	Size	RoxRo ¹	OxO ¹	TxT ¹	RoxRo ¹	OxO ¹	TxT ¹	
MAF10	25	21	16	4 3/4	16 1/4	4 1/4	25x19	2	16x20	21 1/2 x 15 1/2	21 1/2 x 15 1/2	34 1/2 x 18 1/2	20 1/2 x 14 1/2	20 1/2 x 14 1/2	23 1/2 x 17 1/2	75
MAF20	43	22		6 1/2	30		43x20	4		39 1/2 x 16 1/2	39 1/2 x 16 1/2	42 1/2 x 19 1/2	38 1/2 x 15 1/2	38 1/2 x 15 1/2	41 1/2 x 8 1/2	230
MAF30				3	37		6 1/16	43x20		4	39 1/2 x 16 1/2	39 1/2 x 16 1/2	42 1/2 x 19 1/2	38 1/2 x 15 1/2	38 1/2 x 15 1/2	41 1/2 x 8 1/2

All dimensions in inches.

Model	RPM	Fan Capacity - CFM																			
		.00" S.P.		.100" S.P.		.125" S.P.		.250" S.P.		.375" S.P.		.500" S.P.		.625" S.P.		.750" S.P.		.875" S.P.		1.000" S.P.	
		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
MAF10V*	500	485	0.02	295	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	950	921	0.12	880	0.12	850	0.12	685	0.10	525	0.08	-	-	-	-	-	-	-	-	-	-
	1000	970	0.12	935	0.13	905	0.13	745	0.12	630	0.10	-	-	-	-	-	-	-	-	-	-
	1050	1020	0.13	985	0.14	960	0.14	810	0.13	715	0.13	575	0.12	-	-	-	-	-	-	-	-
MAF10R	1450	1485	0.58	1415	0.55	1400	0.54	1315	0.49	1240	0.45	1160	0.41	1065	0.35	965	0.30	790	0.20	350	0.04
	1550	1590	0.66	1525	0.64	1510	0.63	1430	0.60	1355	0.56	1280	0.53	1200	0.49	1110	0.44	1020	0.39	855	0.29
	1650	1695	0.74	1565	0.71	1550	0.70	1465	0.66	1385	0.62	1305	0.58	1220	0.54	1130	0.49	1040	0.44	885	0.33
MAF20** (1/2 HP)	500	1165	0.05	645	0.05	515	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	
	680	1585	0.15	1295	0.15	1215	0.15	620	0.10	-	-	-	-	-	-	-	-	-	-	-	
	760	1775	0.20	1540	0.20	1445	0.20	895	0.15	300	0.10	-	-	-	-	-	-	-	-	-	
	790	1845	0.25	1620	0.20	1525	0.20	1015	0.15	490	0.10	-	-	-	-	-	-	-	-	-	
	830	1935	0.30	1705	0.25	1625	0.25	1165	0.20	750	0.15	100	0.10	-	-	-	-	-	-	-	
	870	2030	0.35	1810	0.30	1735	0.30	1400	0.25	905	0.20	305	0.15	-	-	-	-	-	-	-	
	910	2125	0.40	1900	0.35	1835	0.35	1545	0.30	1050	0.25	545	0.15	-	-	-	-	-	-	-	
	940	2195	0.40	1970	0.40	1910	0.40	1645	0.35	1130	0.30	795	0.20	165	0.15	-	-	-	-	-	
	970	2265	0.45	2030	0.45	1985	0.45	1745	0.40	1250	0.30	910	0.25	335	0.15	-	-	-	-	-	
	1000	2335	0.50	2100	0.50	2060	0.50	1840	0.45	1355	0.35	1035	0.30	490	0.20	-	-	-	-	-	
	1020	2380	0.55	2145	0.50	2105	0.50	1895	0.45	1400	0.40	1100	0.30	640	0.25	140	0.15	-	-	-	
1075	2395	0.55	2150	0.50	2110	0.50	1900	0.45	1650	0.45	1360	0.45	1120	0.40	640	0.30	-	-	-		
MAF30*** (1HP)	500	1775	0.10	1230	0.05	1065	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	
	580	2060	0.15	1595	0.15	1475	0.10	480	0.05	-	-	-	-	-	-	-	-	-	-	-	
	680	2410	0.25	1685	0.20	1930	0.20	1335	0.15	375	0.05	-	-	-	-	-	-	-	-	-	
	780	2765	0.40	2410	0.35	2300	0.35	1895	0.25	1090	0.10	385	0.05	-	-	-	-	-	-	-	
	820	2910	0.45	2565	0.40	2485	0.40	2085	0.35	1510	0.20	655	0.05	-	-	-	-	-	-	-	
	860	3050	0.55	2720	0.50	2660	0.50	2265	0.40	1810	0.30	950	0.10	285	0.05	-	-	-	-	-	
	900	3195	0.60	2860	0.60	2795	0.55	2440	0.45	2030	0.40	1260	0.15	615	0.10	-	-	-	-	-	
	960	3405	0.75	3105	0.70	3020	0.65	2725	0.60	2340	0.50	1870	0.35	1050	0.15	505	0.10	-	-	-	
	990	3510	0.80	3200	0.75	3130	0.75	2855	0.65	2485	0.60	2070	0.45	1280	0.20	705	0.10	-	-	-	
	1020	3620	0.90	3220	0.80	3240	0.80	2980	0.75	2620	0.65	2245	0.55	1525	0.30	910	0.15	370	0.10	-	
	1050	3725	1.00	3420	0.90	3350	0.90	3100	0.85	2760	0.70	2405	0.60	1870	0.40	1140	0.20	620	0.10	-	
1075	3730	1.00	3450	1.00	3400	0.90	3180	0.85	2950	0.80	2660	0.70	2300	0.65	1890	0.45	1260	0.40	-		

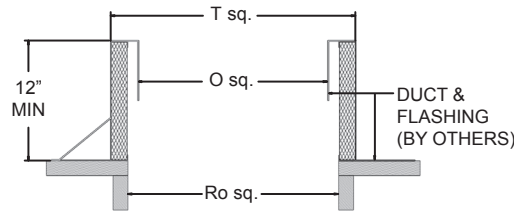
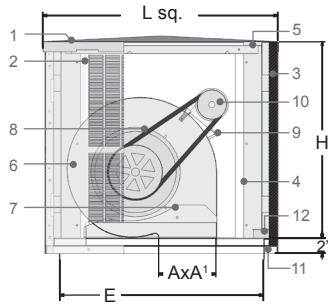
Speed (RPM) shown is nominal. Performance is based on actual speed of test. Other speeds listed are obtainable by using matching Lek-Trol™ speed controller. Ratings are based on tests to AMCA Standard 210. Performance shown is for installation type B - free inlet, ducted outlet. All static pressures shown are EXTERNAL. 0" S.P. INCLUDES all fan housing losses including the drop across CLEAN filters. Ratings include the effects of filters in the airstream.

* Outlet Velocity = CFM / .75 Tip Speed = 1.9 x RPM.

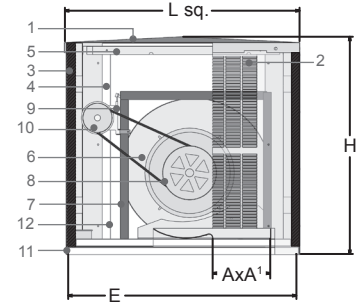
** Outlet Velocity = CFM / .66 Tip Speed = 2.1 x RPM.

*** Outlet Velocity = CFM / .87 Tip Speed = 2.4 x RPM.

MAF | BELT DRIVE



MAF3010 to MAF5018 (left) and MAF6020 (right)



- | | | | |
|--|-----------------------------------|------------------------------------|-----------------------|
| 1. Removable Roof Cap | 4. Filter Track | 8. Belt and Pulleys | 12. Disconnect Switch |
| 2. Louvered Side Panels | 5. Angle Reinforcing Supports | 9. Adjustable Motor Mounting Plate | |
| 3. Removable 1" (2" for MAF6020) Thick Cleanable Filters | 6. Blower Housing | 10. Motor | |
| | 7. Blower Housing Mounting Angles | 11. Mounting Base | |

Model	Dimensional Data					Filters		Self-Flashing Aluminum Curb			Unibeam or Field Built Curb (UNI-12)			Ship Wt. (lbs)
	L	H	A	A'	E	Qty	Size	RoxRo ¹	OxO ¹	TxT ¹	RoxRo ¹	OxO ¹	TxT ¹	
MAF3010	28½	24	11½	13½	22½	4	20 x 25	19	19	22	18	18	21	100
MAF4012	36½	27	13 7/16	15½	27½	4	20 x 25	24	24	27	23	23	26	160
MAF4015	36½	27	15½	18½	27½	4	20 x 25	24	24	27	23	23	26	180
MAF5018	45	27	19½	22½	31	8	20 x 25	27 ½	27 ½	30 ½	26 ½	26 ½	29 ½	310
MAF6020	58½	47	24½	24½	58	16	20 x 25	54 ½	54 ½	57 ½	53 ½	53 ½	56 ½	770

All dimensions in inches.

MAF3010

HP	RPM	Fan Capacity - CFM																	
		0.00" S.P.		.125" S.P.		.250" S.P.		.375" S.P.		.500" S.P.		.625" S.P.		.750" S.P.		.875" S.P.		1.000" S.P.	
		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
1/4	400	1346	0.10	808	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	500	1683	0.18	1302	0.12	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	569	1915	0.27	1591	0.20	1162	0.13	-	-	-	-	-	-	-	-	-	-	-	-
	590	1986	0.30	1676	0.23	1285	0.16	-	-	-	-	-	-	-	-	-	-	-	-
	610	2053	0.33	1756	0.26	1399	0.19	-	-	-	-	-	-	-	-	-	-	-	-
1/3	625	2104	0.35	1816	0.28	1476	0.21	-	-	-	-	-	-	-	-	-	-	-	-
	650	2188	0.40	1914	0.33	1589	0.25	1104	0.17	-	-	-	-	-	-	-	-	-	-
1/2	675	2272	0.44	2012	0.37	1701	0.29	1279	0.21	-	-	-	-	-	-	-	-	-	-
	699	2353	0.49	2105	0.42	1806	0.34	1436	0.25	-	-	-	-	-	-	-	-	-	-
	720	2424	0.54	2185	0.46	1897	0.38	1559	0.29	366	0.09	-	-	-	-	-	-	-	-
	740	2491	0.58	2259	0.51	1982	0.42	1674	0.34	1207	0.23	-	-	-	-	-	-	-	-
3/4	760	2558	0.63	2332	0.55	2066	0.46	1783	0.38	1341	0.28	-	-	-	-	-	-	-	-
	780	2626	0.68	2405	0.60	2148	0.51	1874	0.42	1481	0.32	-	-	-	-	-	-	-	-
	800	2693	0.74	2478	0.65	2230	0.56	1964	0.47	1616	0.37	-	-	-	-	-	-	-	-

MAF4012

HP	RPM	Fan Capacity - CFM																	
		0.00" S.P.		.125" S.P.		.250" S.P.		.375" S.P.		.500" S.P.		.625" S.P.		.750" S.P.		.875" S.P.		1.000" S.P.	
		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
1/4	400	2355	0.24	1950	0.20	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	440	2590	0.32	2255	0.28	1550	0.18	-	-	-	-	-	-	-	-	-	-	-	-
1/3	460	2710	0.36	2410	0.33	1810	0.24	-	-	-	-	-	-	-	-	-	-	-	-
	480	2825	0.41	2570	0.39	2040	0.29	-	-	-	-	-	-	-	-	-	-	-	-
1/2	500	2945	0.46	2720	0.45	2225	0.35	1420	0.19	-	-	-	-	-	-	-	-	-	-
	540	3180	0.58	3005	0.58	2570	0.48	1915	0.34	-	-	-	-	-	-	-	-	-	-
3/4	560	3300	0.65	3140	0.64	2715	0.54	2175	0.42	-	-	-	-	-	-	-	-	-	-
	600	3535	0.80	3410	0.79	3020	0.70	2620	0.59	1800	0.38	-	-	-	-	-	-	-	-
1	620	3650	0.88	3540	0.88	3175	0.79	2795	0.68	2155	0.50	-	-	-	-	-	-	-	-
	660	3885	1.06	3790	1.06	3480	0.98	3135	0.87	2675	0.72	1765	0.43	-	-	-	-	-	-
1 1/2	680	4005	1.16	3910	1.16	3645	1.11	3295	0.98	2895	0.84	2185	0.60	-	-	-	-	-	-
	700	4120	1.27	4030	1.27	3795	1.23	3435	1.08	3080	0.95	2515	0.75	-	-	-	-	-	-
	720	4240	1.38	4155	1.38	3940	1.35	3590	1.19	3260	1.07	2775	0.88	1870	0.54	-	-	-	-
	740	4360	1.50	4275	1.50	4080	1.47	3740	1.32	3435	1.20	3015	1.02	2305	0.74	-	-	-	-

See performance notes on next page.

MAF | BELT DRIVE

MAF4015

HP	RPM	Fan Capacity - CFM																	
		0.00" S.P.		.125" S.P.		.250" S.P.		.375" S.P.		.500" S.P.		.625" S.P.		.750" S.P.		.875" S.P.		1.000" S.P.	
		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
1/3	340	3525	0.40	2765	0.28	1165	0.10	-	-	-	-	-	-	-	-	-	-	-	-
	360	3730	0.48	3025	0.35	1865	0.18	-	-	-	-	-	-	-	-	-	-	-	-
1/2	380	3940	0.56	3285	0.42	2365	0.26	-	-	-	-	-	-	-	-	-	-	-	-
	400	4145	0.66	3545	0.51	2740	0.35	-	-	-	-	-	-	-	-	-	-	-	-
3/4	420	4355	0.76	3795	0.60	3060	0.44	1580	0.21	-	-	-	-	-	-	-	-	-	-
	460	4770	1.00	4275	0.83	3640	0.66	2775	0.45	-	-	-	-	-	-	-	-	-	-
1	480	4975	1.13	4505	0.96	3900	0.78	3170	0.58	1605	0.28	-	-	-	-	-	-	-	-
	500	5180	1.28	4735	1.10	4165	0.91	3530	0.71	2380	0.44	-	-	-	-	-	-	-	-
1 1/2	520	5390	1.44	4955	1.25	4420	1.06	3830	0.86	2935	0.60	-	-	-	-	-	-	-	-
	560	5805	1.80	5405	1.59	4945	1.39	4410	1.18	3770	0.94	2695	0.62	-	-	-	-	-	-
2	580	6010	2.00	5625	1.78	5195	1.57	4670	1.36	4120	1.13	3245	0.82	1905	0.45	-	-	-	-
	600	6220	2.21	5850	1.99	5440	1.77	4935	1.55	4420	1.31	3720	1.03	2475	0.66	-	-	-	-
3	620	6425	2.44	6070	2.21	5680	1.98	5200	1.76	4715	1.52	4100	1.25	3155	0.89	1465	0.46	-	-
	640	6635	2.68	6290	2.45	5920	2.21	5455	1.98	5000	1.74	4460	1.47	3670	1.14	2345	0.72	-	-
	660	6840	2.94	6505	2.70	6155	2.46	5715	2.22	5275	1.97	4790	1.71	4135	1.39	3105	0.99	1255	0.50

MAF5018

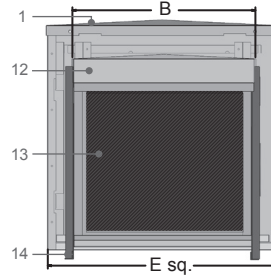
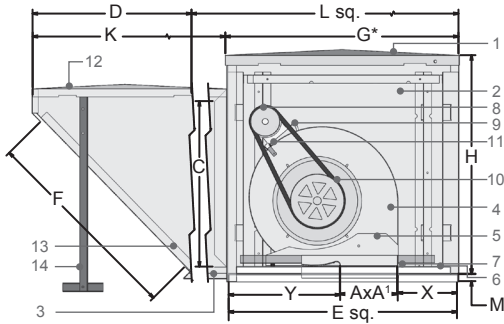
HP	RPM	Fan Capacity - CFM																	
		0.00" S.P.		.125" S.P.		.250" S.P.		.375" S.P.		.500" S.P.		.625" S.P.		.750" S.P.		.875" S.P.		1.000" S.P.	
		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
1/2	263	4750	0.51	3771	0.37	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/4	302	5455	0.78	4766	0.64	2849	0.35	-	-	-	-	-	-	-	-	-	-	-	-
1	328	5925	1.00	5375	0.86	3997	0.57	-	-	-	-	-	-	-	-	-	-	-	-
1 1/2	377	6810	1.51	6332	1.36	5472	1.12	3896	0.72	-	-	-	-	-	-	-	-	-	-
2	400	7225	1.81	6775	1.64	6062	1.41	4832	1.03	-	-	-	-	-	-	-	-	-	-
	416	7514	2.03	7081	1.86	6465	1.64	5404	1.26	-	-	-	-	-	-	-	-	-	-
3	430	7767	2.24	7348	2.07	6813	1.86	5810	1.49	4204	1.03	-	-	-	-	-	-	-	-
	450	8128	2.57	7728	2.39	7302	2.20	6377	1.84	5134	1.36	-	-	-	-	-	-	-	-
	477	8616	3.06	8239	2.87	7861	2.68	7096	2.34	6136	1.88	4465	1.35	-	-	-	-	-	-
5	500	9032	3.53	8671	3.32	8311	3.12	7680	2.81	6808	2.37	5622	1.84	-	-	-	-	-	-
	520	9393	3.97	9047	3.76	8700	3.55	8180	3.26	7375	2.83	6372	2.29	4687	1.68	-	-	-	-
	540	9754	4.44	9421	4.22	9087	4.01	8672	3.75	7916	3.33	7063	2.80	5864	2.21	-	-	-	-
567	10242	5.14	9924	4.91	9607	4.69	9289	4.46	8607	4.04	7839	3.53	6883	2.94	5459	2.34	-	-	

MAF6020

HP	RPM	Fan Capacity - CFM																	
		0.00" S.P.		.125" S.P.		.250" S.P.		.375" S.P.		.500" S.P.		.625" S.P.		.750" S.P.		.875" S.P.		1.000" S.P.	
		CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP	CFM	BHP
1/2	246	5817	0.51	4438	0.35	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3/4	284	6716	0.78	5583	0.60	3795	0.35	-	-	-	-	-	-	-	-	-	-	-	-
1	308	7284	1.00	6259	0.80	4868	0.56	-	-	-	-	-	-	-	-	-	-	-	-
1 1/2	354	8371	1.52	7517	1.30	6466	1.05	4967	0.71	-	-	-	-	-	-	-	-	-	-
2	373	8821	1.77	8023	1.56	7045	1.29	5789	0.97	-	-	-	-	-	-	-	-	-	-
	390	9223	2.03	8460	1.80	7553	1.52	6455	1.23	4757	0.83	-	-	-	-	-	-	-	-
3	408	9648	2.32	8920	2.08	8077	1.79	7080	1.51	5696	1.09	-	-	-	-	-	-	-	-
	448	10594	3.07	9931	2.81	9196	2.51	8361	2.20	7371	1.85	5947	1.37	-	-	-	-	-	-
5	467	11044	3.48	10407	3.21	9718	2.90	8934	2.57	8033	2.23	6870	1.75	4886	1.21	-	-	-	-
	532	12581	5.14	12022	4.83	11463	4.52	10800	4.13	10098	3.76	9320	3.38	8372	2.89	7137	2.32	-	-
7 1/2	554	13101	5.81	12565	5.49	12028	5.16	11409	4.77	10755	4.37	10047	4.01	9215	3.55	8189	2.94	6858	2.43
	585	13834	6.84	13326	6.50	12818	6.16	12258	5.77	11649	5.33	10995	4.94	10286	4.52	9466	4.01	8449	3.33
	610	14426	7.75	13938	7.40	13451	7.04	12935	6.66	12351	6.20	11745	5.77	11102	5.37	10358	4.88	9491	4.27

Power Rating (BHP) Includes drive losses. Outlet Velocity = CFM ÷ 1.41. Tip Speed 3.3 x RPM. Performance shown is for installation type B: free inlet, ducted outlet. The AMCA Certified Ratings Seal applies to air performance ratings only. Performance ratings include the effects of filters in the airstream.

MAS | BELT DRIVE



1. Removable Roof Cap with Gasket
2. Galvanized Steel Housing
3. Integral Mounting Base
4. Blower Housing
5. Blower Housing Mounting Plates
6. Steel Angle Cross Braces
7. Anti-vibration Mounts
8. Thermally Protected Motor
9. Safety Disconnect Switch
10. Belt and Pulleys
11. Adjustable Motor Mounting Plate
12. Filter Hood (Optional Extension)
13. Cleanable Filters
14. Hood Support Angles with Feet

Model	E* Sq.	Ro Sq.	L Sq.	H	Y	Outlet A x A1	X	Inlet Duct		D	F	G**	K	M	Qty/Size (WxH) of Filters	
								C	B							
MAS10B	28 3/8	20	28 3/8	27 1/8	8	11 1/2	13	8 3/8	22 1/2	22 3/8	23 3/8	27 1/8	120	19 3/8	2	(1) 21 1/2 x 26 1/4
MAS12B	32 3/8	24	32 3/8	31 3/8	8 3/8	13 1/2	15 1/2	10 1/4	26 3/4	26 3/8	27 3/4	33 3/8	120	23 3/8	2	(1) 25 3/4 x 32 1/4
MAS15B	32 3/8	24	32 3/8	31 3/8	7 1/2	15 1/4	18 3/8	9	26 3/4	26 3/8	27 3/4	33 3/8	120	23 3/8	2	(1) 25 3/4 x 32 1/4
MAS18B	36 3/8	28	36 3/8	35 3/8	6 3/8	18 3/8	21 3/4	10 3/8	30 1/2	30 3/8	31 3/8	38 1/2	120	27 1/4	2 1/2	(2) 18 3/4 x 29 1/2
MAS20B	48 3/8	40	48 3/8	52 3/8	11 3/8	24 3/4	24 3/4	12 3/8	42	42 3/8	43	54 3/8	120	38 3/8	3 1/2	(2) 26 3/4 x 41

All dimensions in inches. *Outside dimension of curb should be 1 1/2" less than 'E' dimension. ** With optional extension only.

Model	HP	RPM	Peak BHP	Fan Capacity - CFM											
				.000" S.P.	.125" S.P.	.250" S.P.	.375" S.P.	.500" S.P.	.625" S.P.	.750" S.P.	1.000" S.P.	1.250" S.P.	1.500" S.P.		
				CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM		
MAS10B	1/4	739	0.30	1837	1653	1415	-	-	-	-	-	-	-	-	-
	1/3	795	0.38	1977	1806	1593	1332	-	-	-	-	-	-	-	-
	1/2	915	0.57	2275	2129	1960	1765	1526	-	-	-	-	-	-	-
	3/4	1052	0.87	2616	2489	2357	2195	2024	1819	-	-	-	-	-	-
	1	1127	1.07	2802	2684	2562	2420	2262	2094	1895	-	-	-	-	-
	1 1/2	1295	1.63	3220	3117	3013	2905	2776	2639	2500	2163	-	-	-	-
MAS12B	1/4	527	0.30	2300	2021	1522	-	-	-	-	-	-	-	-	-
	1/3	567	0.38	2475	2225	1804	-	-	-	-	-	-	-	-	-
	1/2	653	0.57	2851	2640	2354	1918	-	-	-	-	-	-	-	-
	3/4	750	0.87	3274	3093	2883	2583	2186	1631	-	-	-	-	-	-
	1	804	1.07	3510	3341	3158	2908	2567	2193	-	-	-	-	-	-
	1 1/2	924	1.62	4034	3886	3736	3559	3333	3041	2717	-	-	-	-	-
MAS15B	2	1019	2.18	4449	4314	4181	4038	3863	3645	3377	2789	-	-	-	-
	3	1169	3.29	5103	4986	4871	4752	4626	4472	4296	3848	3336	2607	-	-
	1/4	338	0.30	2883	2349	-	-	-	-	-	-	-	-	-	-
	1/3	364	0.37	3105	2625	-	-	-	-	-	-	-	-	-	-
	1/2	418	0.57	3565	3160	2567	-	-	-	-	-	-	-	-	-
	3/4	481	0.87	4103	3754	3355	2668	-	-	-	-	-	-	-	-
MAS18B	1	516	1.07	4401	4078	3725	3198	-	-	-	-	-	-	-	-
	1 1/2	593	1.62	5058	4779	4487	4151	3655	2955	-	-	-	-	-	-
	2	654	2.17	5578	5324	5065	4791	4451	3966	3324	-	-	-	-	-
	3	750	3.28	6397	6174	5953	5723	5479	5192	4791	3735	-	-	-	-
	5	891	5.50	7600	7411	7228	7038	6845	6644	6423	5859	5078	-	-	-
	1/2	426	0.57	4068	3607	2999	-	-	-	-	-	-	-	-	-
MAS20B	3/4	489	0.86	4669	4280	3823	3208	-	-	-	-	-	-	-	-
	1	525	1.07	5013	4650	4237	3717	3074	-	-	-	-	-	-	-
	1 1/2	603	1.62	5758	5440	5107	4730	4248	3695	-	-	-	-	-	-
	2	665	2.17	6350	6059	5779	5439	5066	4626	4119	-	-	-	-	-
	3	762	3.27	7276	7021	6776	6512	6215	5902	5518	4662	-	-	-	-
	5	906	5.50	8651	8434	8226	8021	7802	7553	7302	6716	6063	5270	-	-
MAS20B	3/4	386	0.86	5995	5426	4492	3306	-	-	-	-	-	-	-	-
	1	414	1.07	6430	5933	5115	4077	-	-	-	-	-	-	-	-
	1 1/2	476	1.62	7393	6963	6376	5575	4653	3441	-	-	-	-	-	-
	2	524	2.16	8139	7746	7272	6634	5849	4980	3871	-	-	-	-	-
	3	602	3.28	9350	9006	8672	8167	7594	6914	6185	4349	-	-	-	-
	5	715	5.49	11106	10811	10531	10239	9802	9364	8814	7636	6325	-	-	-
7 1/2	819	8.26	12721	12461	12215	11971	11704	11322	10940	10033	9017	7911	-	-	

Power Rating (BHP) Includes drive losses. Outlet Velocity = CFM ÷ 1.41. Tip Speed 3.3 x RPM. Performance shown is for installation type B: free inlet, ducted outlet. The AMCA Certified Ratings Seal applies to air performance ratings only. Performance ratings include the effects of filters in the airstream.

ENGINEERING SPECIFICATIONS

Model

MAF = Make-up Air
MAS = Side Intake

Unit Size

10, 20, 30, 3010, 4012, 4015, 5018, 6020

Drive Type

D = Direct Drive
B = Belt Drive

Motor Tap

C = 690 RPM
RC = 1750 RPM
SC = 1750 RPM
VC = 1750 RPM

Motor Speed

1 = Single Speed
2 = 2S2W 1800/1200
3 = 2S1W 1800/900
4 = 2S1W 1800/1200

Horse Power

See selection software.

Enclosure

O = Open Drip Proof
X = Special

Voltage

See selection software.

Phase

1 = Single
3 = Three

Cycle

5 = 50 Hz
6 = 60 Hz

Efficiency

S = Standard
P = Premium

AMCA Classification

0 = None
C = AL IN/PL
B = ALWL/PLT

Paint / Coating

0 = None
F = Epoxy Powder Coat*
G = Epoxy Powder Coat with UV*
H = Hi-Temp Powder Coat*
J = Non-Stick Powder Coat*
K = Phenolic Powder Coat*
L = Phenolic Powder Coat with UV*
N = Polyester Powder Coat
X = Special

* Not available with choice of color.

Color

0 = None
00 = Standard Gray
50 = Chrome Green
55 = Pale Green
56 = Dove Gray
61 = White
63 = Oxford Beige
65 = Dover White
66 = Desert Tan
70 = Black
73 = Smoke Gray
77 = Brick Red
79 = Peppercorn
81 = Pale Brown
83 = Chocolate Brown
85 = Timeless Bronze
94 = Charcoal
X = Special

Damper

0 = None
CBD = Counter Balanced Supply Damper
MD1 = Motor Operated Damper 115V
MD2 = Motor Operated Damper 230V
MD4 = Motor Operated Damper 460V

Roof Curb

See selection software.

Slope

0 = None
S = Single
D = Double

Metal Liner

0 = None
L = Metal Liner

Damper Holding Plate

0 = None
P = Damper Holding Plate

Neoprene Gasket

0 = None
G = Gasket

Wooden Nailer

0 = None
W = Wooden Nailer

Curb Paint/Coating

0 = None
B = Air Dried Epoxy
Q = Air Dried Enamel

Thermal Overload Protection

0 = None
P = Thermal Protection

Side Discharge Pedestal

0 = None
A = Aluminum
G = Galvanized

Disconnect Switch

0 = None
1 = NEMA 1
3R = NEMA 3R Disconnect Switch
4 = NEMA 4 Disconnect Switch
X = Special

Internal Wiring

0 = None
3R = NEMA 3R Internal Wiring
4 = NEMA 4 Internal Wiring
X = Special

ENGINEERING SPECIFICATIONS

MAF - Direct Drive Units

Direct Drive Roof Supply (Intake) fan shall be model MAF, manufactured by YORK® by Johnson Controls. Fan housing shall be low profile, galvanized steel, incorporate die formed louvered side panels and a removable roof cap for access to filters and motor/fan assembly. Removable, permanent, washable filters shall be mounted behind all louvered openings. Fans shall have two forward curved centrifugal wheel assemblies sharing a center mounted motor. Fan motor shall be continuous duty, ball bearing design, permanently lubricated, positively cooled and double shafted. Each fan shall be _cUL_{US} listed.

MAF - Belt Drive Units

Belt Driven Roof Supply (Intake) fan shall be model MAF, manufactured by YORK® by Johnson Controls. Fan housing shall be low profile, galvanized steel, incorporate die formed louvered side panels and a removable roof cap for access to filters and motor/fan assembly. Removable, permanent, washable filters shall be mounted behind all louvered openings. Fans shall have a forward curved centrifugal wheel. Fan motor shall be continuous duty, ball bearing design, permanently lubricated, positively cooled and furnished at the specified voltage, phase and enclosure. Pulleys shall be adjustable, cast iron, machined, keyed, securely attached and sized for 150% of the horsepower at its rated maximum speed. Each fan shall bear the AMCA Licensed Ratings Seal for Air Performance and shall be _cUL_{US} listed.

MAS - Belt Drive Units

Belt driven Roof Filtered Supply (intake) fan shall be model MAS, manufactured by YORK® by Johnson Controls. Fan housing shall be galvanized steel, incorporate an intake hood (extended version optionally available for NFPA96), and a pitched removable housing cover, gasketed and insulated, including quick release latches. Removable, permanent, washable filter(s) shall be mounted on the intake hood opening. Fan shall have a forward curved centrifugal wheel. Fan motor shall be continuous duty, ball bearing design, permanently lubricated, positively cooled and furnished at the specified voltage, phase and enclosure. Pulleys shall be adjustable, cast iron, machined, keyed, securely attached and sized for 150% of the horsepower at its rated maximum speed. Each fan shall be _cUL_{US} listed.



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INSTALL CONFIDENCE.

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