

## the next generation of



# PACKAGED MAKE-UP AIR

with unique multi-speed control\*

#### **APPLICATIONS**

Electro Industries' Packaged Make-Up Air units are designed for today's tighter homes where unhealthy negative pressure can be created by appliances such as kitchen vent hoods, fireplaces, dryers, gas furnaces, water heaters, bathroom exhaust fans or any appliance without sealed combustion.

These high efficiency units provide fresh air to keep the home or building at positive pressure, reducing backdrafting combustion gasses that could create a health risk.

International Residential Code (IRC) requires exhaust hood systems of 400 CFM and greater to have make-up air equal to the exhaust air and to automatically open and close with the operation of the fan.

#### STANDARD FEATURES

- WarmFlo® Digital Proportional Temperature Control

   utilizes full element modulation with solid state relay,
   inlet and outlet temperature sensors, to maintain precise
   user defined temperature set point
- Integrated powered inlet damper
- Aluminum mesh permanent washable filter
- All models include (1) CT "doughnut"

- · Simple installation, mounting kit included
- Listed for horizontal or vertical installation
- · Can be easily wall-hung
- 20-year finned rod element warranty
- 2-year parts warranty
- Made in the USA

#### **ELECTRO'S INDUSTRY EXCLUSIVE FEATURES OF 3-22 KW MODELS**

\*Electro's unique control adapts to multi-speed range hoods or multiple fan applications:

- Multiple Fan Speed Output Low, Medium, and High fan speed output to match multi-speed range hoods.
- Multiple Control Input Options Three current transformer (CT) inputs allow for multiple fan applications. CT inputs will
  also provide variable blower speeds to more closely match multi-speed exhaust fans. Activation can also be as simple as
  an end switch or contact closure.
- LCD Display Interactive display used for multiple fan speed calibration and real time estimated CFM output. Also displays desired target temperature as well as incoming and supply air temperatures.

#### **ELECTRO'S FEATURES OF 1-2 KW MODELS**

- Variable Fan Speed Output Easy to adjust fan speed knob allows for precise CFM output.
- 120VAC Power Connection Plug-in cord allows for simple power connection.
- Control Input Options Activated through a basic end switch connection, thermostat, or current sensing relay.

#### SPECIFICATIONS (Reference Installation & Operating Instructions, El906/El907)

Model	kW	Btu/h	Amps	Inter-	Motor	Motor	Phase	Voltage	CFM		Max Fuse/	Duct	Shipping
Wiodei	KVV	Dtu/II	Amps	nal CB	FLA	HP	Filase	voltage	Max	Max Static	HACR	Connection	Weight
EM-MA01-120-1-06	1	3,410	8.3	N/A	0.5	1/16	1-50/60	120	150	0.03"	15	6"	31
EM-MA02-120-1-06	1.6	5,460	13.3	N/A	0.5	1/16	1-50/60	120	150	0.03"	20	6"	32
EM-MA05-240-1-08	5	17,070	20.8	N/A	0.4	1/10	1-50/60	240	350	0.03"	30	8"	55
EM-MA10-240-1-10	10	34,150	41.6	N/A	0.8	1/5	1-50/60	240	625	0.03"	60	10"	56
EM-MA15-240-1-14	15	51,220	62.4	60 + 30	1.7	1/3	1-50/60	240	1050	0.25"	90	14"	115
EM-MA20-240-1-14	20	68,300	83.2	60 + 60	2.5	1/2	1-50/60	240	1200	0.25"	120	14"	120
EM-MA03-208-3-08	3	10,240	8.3	N/A	0.4	1/10	3-50/60	208	350	0.03"	15	8"	55
EM-MA06-208-3-08	6	20,480	16.7	N/A	0.4	1/10	3-50/60	208	350	0.03"	25	8"	58
EM-MA14-208-3-14	14.4	49,170	40.0	50	1.7	1/3	3-50/60	208	900	0.25"	50	14"	115
EM-MA22-208-3-14	21.6	73,760	60.0	50 + 30	2.5	1/2	3-50/60	208	1250	0.25"	80	14"	125

### TEMPERATURE RISE - Selecting the best model for your application:

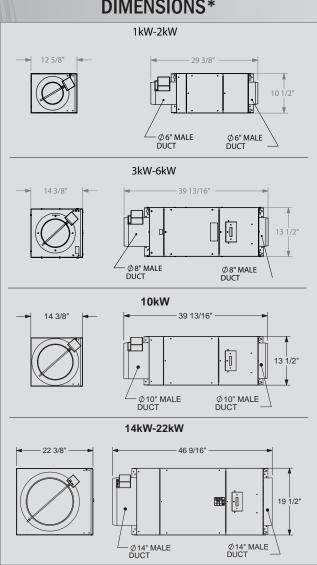
- Choose your desired temperature rise (this is the difference between the coldest design day temperature and desired duct air temperature).
- 2 Move across the chart from your desired temperature rise to the CFM required (you may have to select a model with a higher CFM and adjust down to your required CFM at installation).

In an application where your coldest day averages 0° F and you require 50° F duct air, choose 50° F temperature rise. If you require 400 CFM you would select the MA10.

		SINGLE PHASE MODELS								
	Model →	MA01	MA02	MA05	MA10	MA15	MA20			
Required Temp Rise		CFM	CFM	CFM	CFM	CFM	CFM			
	80° F	39	71	197	395	604	790			
	70° F	45	81	225	451	677	903			
	60° F	53	95	260	526	790	1053			
	50° F	63	114	316	632	948	1264			
	40° F	79	158	N/A	N/A	1185	N/A			
	30° F	105	168	N/A	N/A	N/A	N/A			

THREE PHASE MODELS							
MA03	MA06	MA14	MA22				
CFM	CFM	CFM	CFM				
119	237	553	869				
135	271	632	993				
158	316	737	1160				
190	379	885	N/A				
237	N/A	N/A	N/A				
316	N/A	N/A	N/A				

#### **DIMENSIONS\***





#### INSTALLATION SPECIFICATIONS

This product is designed for zero clearance, but use the following mounting and spacing criteria:

- 1. Unit can be installed vertically or horizontally. When vertical, inlet must face down.
- 2. When using CT doughnut, use Class II low voltage wiring methods to connect CT to Make-Up Air unit.
- 3. Make mounting provisions for a 1" air space at the top.
- 4. The sides, any location, can be in direct contact with wood framing materials.
- 5. No materials shall be in contact with the cabinet housing which has a flame point less than wood, 300° F (150° C).
- 6. Product shall be installed in a conditioned space only.
- 7. Heating elements are locked out when entering air temperature is  $> 55^{\circ}$  F (12.8° C).

\*Dimensional drawings shown in side view. TO LOCATE A CONTRACTOR OR DISTRIBUTOR IN YOUR AREA VISIT WWW.ELECTROMN.COM AND CLICK ON **DEALER FINDER** 



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