

MUA-DG

Make Up Air-Direct Fired



Form#: SS192_MUA-DG-Direct Fire Make-up Air Unit
Date: 05-2022 - Rev4

Features & Benefits

- Meets U.S. and Canadian Standards and Codes
- Listed to ANSI Standard Z83.4/CSA 3.7
- Natural Gas
- Gas Supply Pressure: 8 in. w.c./14 in. w.c.
- Maximum External Static Pressure 1.5" w.c.
- Maximum Temperature rise: 100°F
- Maximum Discharge Temperature: 90°F
- Belt Drive, Forward Curve Blower
- Unit Mounted Controls
- Horizontal or down discharge

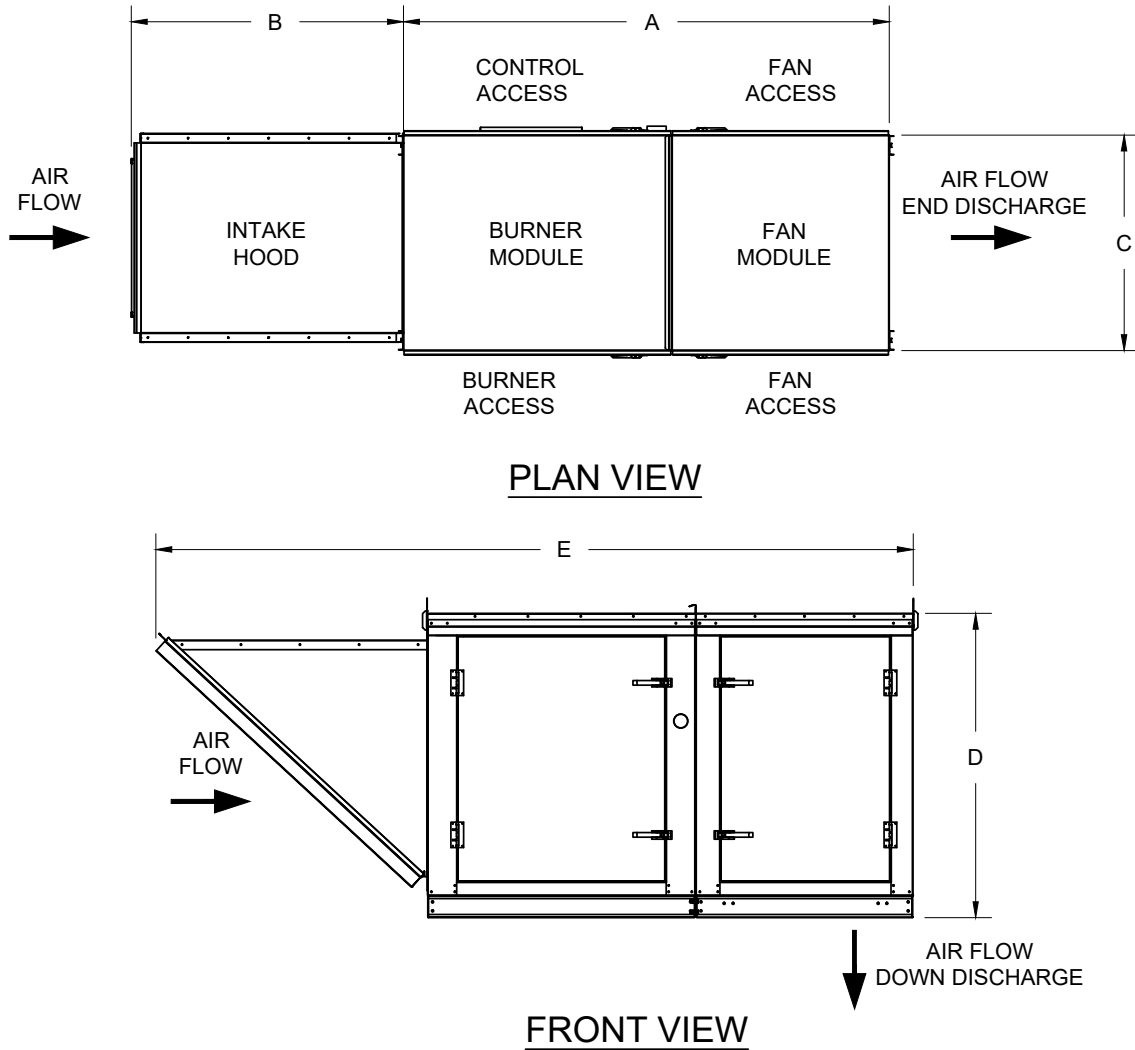
Specification

Halton's MUA-DG units provide filtered and tempered make up air where ever the need arises to maintain a balanced space. The unit can be utilized for constant volume or work in conjunction with Halton's M.A.R.V.E.L. demand control variable volume system.

Performance Data

Model	Airflow Ranges (CFM)	Max. Temp. Rise	Max. Heat Input (Btu/hr)	Voltage				HP
MUA-DG-1800	850 - 1,800	100	210,908	115,208, 230	/	1	/	0.25 - 15
MUA-DG-2800	Up to 2,800		328,079					
MUA-DG-4600	Up to 4,600		538,987					
MUA-DG-8500	Up to 8,500		995,954	208,230 460,575	/	3	/	
MUA-DG-12600	Up to 12,600		1,476,355					
MUA-DG-16000	Up to 16,000		1,878,261					

Dimensional Data



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Note: Downward or horizontal discharge opening dimensions will depend on the fan type and size selected. Please refer to the job-specific submittal drawings for these dimensions.

Model	(A)		(B)		(C)		(D)		(E)		Length of Optional MERV 8 ² indoor filter module		Weights*
	Length		Intake Hood Length		Width		Height		Overall Length		Inch	mm	
	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	lbs / kg
MUA-DG-1800	64.5	1638	30.7	780	27	686	38	965	95.2	2418	28.3	719	718lbs / 326kg
MUA-DG-2800	66.5	1689	37.3	947	30	762	42	1067	103.8	3322	31.3	795	838lbs / 380kg
MUA-DG-4600	76.5	1943	42.8	1087	34	864	48	1219	119.3	3030	27.3	693	982lbs / 445kg
MUA-DG-8500	88.5	2248	52.9	1344	46	1168	60	1524	141.4	3592	28.3	719	1422lbs / 645kg
MUA-DG-12600	105.5	2680	66.2	1682	58	1473	72	1829	171.7	4361	30.3	770	2048lbs / 929kg
MUA-DG-16000	114.5	2908	71.3	1811	58	1473	74	1880	185.8	4719	31.3	795	2338lbs / 1061kg

²MERV 8 filter module for indoor units only. MERV 8 filters installed in intake hood on outdoor units.

* Weight assumes all options, refer to submittal drawing for actual weight.

Standard Features

- Belt Drive, forward curved blower
- Rolled Steel, ODP Blower motor
- Motorized intake damper
- Unit Mounted Discharge Temp. Controls
- Unit Mounted Call for Heat
- Remote Start/Stop
- Constant volume
- Unit mounted Non-Fused Disconnect
- Neoprene Fan Isolators
- End or Bottom discharge
- 1" Insulation, double wall
- G90 Galvanized, unpainted

Options Available

- Direct Drive, Plenum Fan
- TEFC Blower Motor (Rolled Steel or Cast Iron)
- Intake Hood w/ 2" Alum. Mesh Filters & Bird Screen
- MERV 8 Dust Filters
- Gravity Intake Damper
- Remote DAT (Discharge Air Temp.) or Space Temp. Controls
- Freeze Stat
- Variable Volume (Halton provides VFD)
- Seismic Blower Isolators
- Roof Curb (Optional Insulation & Nailer)
- Uninsulated
- Gas Pressure Gauges
- High and Low Gas Pressure Switches
- Gas Regulator (Field Installed)
- Paint

Specification

Supply a Halton model MUA-DG-_____ non-recirculating direct fired gas, heat only make-up air unit ETL listed to ANSI Z83.4/CSA 3.7 for indoor and outdoor installation and constant airflow (variable is an option) The unit shall be supplied complete with a Burner and Blower module factory assembled and tested along with components, options, and field installed accessories as follows:

The unit shall deliver _____ CFM at ____ in. w.c. external static pressure at a discharge air temperature of ____ °F. The unit shall have a natural gas input rate of _____ Btu/hr.

The unit shall be provided with the controls cabinet on the _____ hand side when facing the intake opening of the unit.

Burner Module

The Burner Module shall have a 20 ga. G90 galvanized steel exterior shell, 14 ga. G90 galvanized steel base frame, burner supports, and lifting lugs. The module construction shall be suitable for outdoor installation. The Burner Module shall have burner profile plates capable of being adjusted in the field during startup and commissioning to optimize burner performance across the designed airflow rate range. The module shall include an integral controls cabinet with a factory installed main electrical power disconnect and optional factory mounted exterior weatherproof junction box for main power connection. The module shall include removable access doors with hinges and gasket seals to allow access to the controls cabinet and burner.

Option: The Burner Module shall have 1" insulation covered with an interior steel shell.

Option: The Burner Module shall have a motorized intake air damper with leakage rates complying with ASHRAE 90.1.

Burner

The Burner shall be a direct-fired two stage combustion burner constructed of cast aluminum burner sections with stainless steel burner plates and an efficiency of 92%. The Burner shall have a factory installed direct spark for gas trains up to ¾" diameter and piloted ignition assembly with a flame rod and a spark rod for gas trains 1" and greater. The Burner shall be factory piped to a direct spark or piloted gas valve train as noted. The gas valve train shall have a modulating temperature control ball valve and test ports for optional factory or field installed gas pressure gauges and/or gas pressure switches.

Blower Module

The Blower Module shall have a 20 ga. G90 galvanized steel exterior shell, 14 ga. G90 galvanized steel base frame, blower supports, and lifting lugs. The module construction shall be suitable for outdoor installation. The module shall include at least one removable access door with hinges and gasket seals to allow access to the blower. The module shall have a discharge opening on either the end or bottom of the module.

Option: The module shall include a factory mounted junction box on the bottom exterior for main power connection from the inside of a roof curb.

Option: The Blower Module shall have 1" insulation covered with an interior steel shell.

Blower

The Blower shall be either a belt driven double inlet forward curved centrifugal fan or direct driven backward curved airfoil plenum fan. The Blower shall be AMCA certified, shall be installed on neoprene isolators and shall be powered by a listed or recognized electric ODP or TEFC motor with rolled steel or cast iron construction.

The Blower for a variable airflow unit shall have a pressure port for measuring airflow rate. The blower motor for a variable airflow unit shall be controlled by either a factory installed or externally supplied and installed VFD.

Option: Blower seismic isolators

Electrical Power

The unit shall have a single point power connection rated for one of the following voltages: 115/1/60, 208/1/60, 230/1/60, 208/3/60, 230/3/60, 460/3/60, 575/3/60.

Controls

The unit shall have either a unit mounted means of call for heat and/or start/stop or connections for a remote mounted call for heat and/or start/stop. The unit shall have an RTC Solutions control system to provide automatic control of the Burner to maintain the desired discharge air temperature. The discharge air temperature shall be set by either unit mounted, remote, or space temperature controller means. Optionally, the unit shall have freeze stat controls.

Clearance to Combustible Materials

The unit shall be listed for a minimum, without Burner and Blower module insulation, of 0 inches of clearance

to combustible materials on the top and bottom of the Burner and Blower modules and a minimum of 1 inch of clearance to combustible materials on the inlet end of the Burner module and discharge end of the Blower module.

Intake Hood (Optional)

A unit for outdoor installation shall be provided with a factory built intake hood constructed of 20 ga. G90 galvanized steel with birdscreen and removeable, washable 2" aluminum mesh filters.

Filter Section (Optional)

The unit shall be provided with an inlet Filter section constructed of 20 ga. G90 galvanized steel with replaceable MERV 8 filters.

Gravity Damper Section (Optional)

The shall be provided with a gravity intake damper section constructed of 20 ga. G90 galvanized steel.

Roof Curb (Optional)

The unit shall be capable of being installed on a factory or field provided roof curb. The factory provided roof curb shall be constructed of 18 ga. aluminized steel with optional insulation and/or wood nailer.

Paint (Optional)

The Burner module, Blower module, Intake Hood, Filter section, and Gravity Damper section exterior shall be pre-treated and fully powder coated with thermoset polyester paint.

The company has a policy of continuous product development, therefore we reserve the right to modify design and specifications without notice.

For more information, please contact your nearest Halton agency. To find it: www.halton.com