

MUA-DGX

Direct Fired Make Up Air with DX cooling



Form#: SS193_MUA-DGX-Direct Fire Make-up Air Unitwith DX Cooling
Date: 05-2022 - Rev4

Features & Benefits

- Packaged units up to 12.5 tons
- Split systems up to 25 tons
- Commercial-grade Trane condenser unit w/ dual compressors (R-410A refrigerant)
- 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-DGX - Direct Fired Make Up Air with DX cooling units provide space neutral conditions and tempered make up air wherever 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

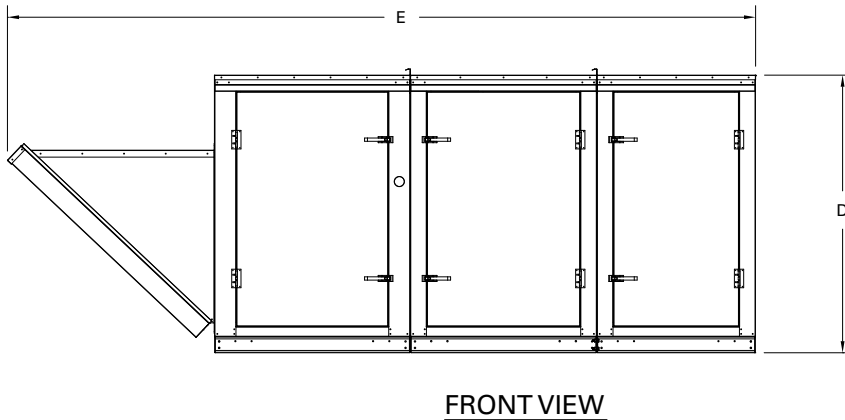
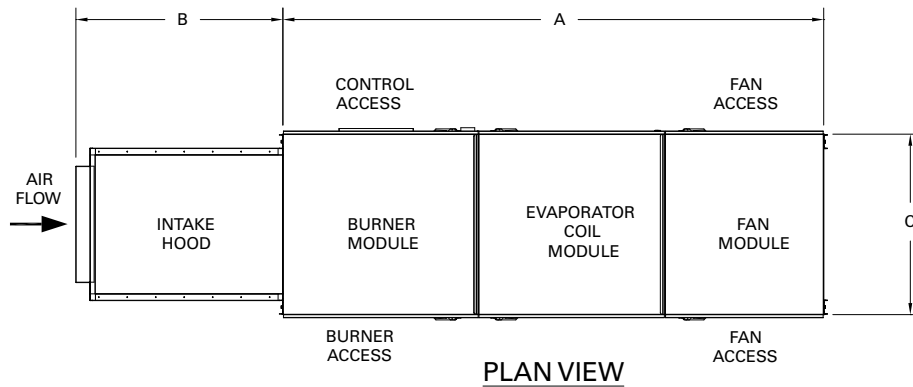
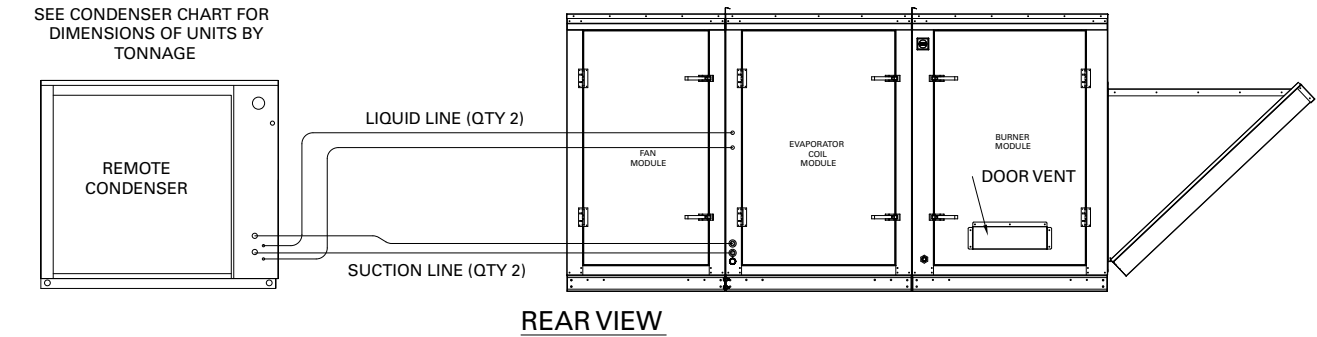
Model	Airflow Ranges (CFM)	Cooling		Heating		Voltage	HP	
		Nominal Capacities - Packaged (Tons)	Nominal Capacities - Split System (Tons)	Max. Temp. Rise	Max. Heat Input (Btu/hr)			
MUA-DGX-1800	1,050 - 1,800	6 & 7.5	6 & 7.5	100°F (37.8°C)	210,908	115,208,230 / 1 / 60	0.25-15	
MUA-DGX-2800	Up to 2,800	6, 7.5, 10 & 12.5	6, 7.5, 10 & 12.5		328,079			
MUA-DGX-4600	Up to 4,600	6, 7.5, 10 & 12.5	6, 7.5, 10, 12.5, 15 & 20		538,987			
MUA-DGX-8500	Up to 8,500	7.5, 10 & 12.5	7.5, 10, 12.5, 15, 20 & 25		995,954			208,230,460, / 3 / 60 575
MUA-DGX-12600	Up to 12,600	N/A	15, 20 & 25		1,476,355			

MUA-DGX Make-Up Air Unit

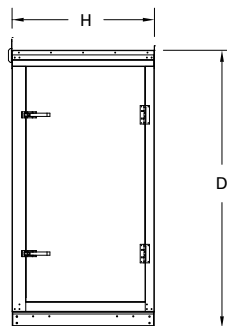
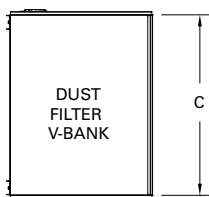
Direct Fired Make-Up Unit with DX Cooling

Dimensional Data

MUA-DGX with Remote Condenser Unit



OPTIONAL INDOOR MERV 8 DUST FILTER MODULE



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.

MUA-DGX with Remote Condenser Unit

Unit Size (Tons)	Width (in.) ¹	Height (in.)	Depth (in.) ¹
6	36	39.2	42
7.5			
10	40	39.1	52
12.5		44.8	
15	95.4	44.8	46
20			
25			

¹Dimension includes standard condenser unit hail guards

Model	(A)		(B)		(C)		(D)						Length of Optional MERV 8 ² indoor filter module		Weight *	
	Length Without		Burner/Evap /Fan		Intake Hood		Housing Width		Housing Height		OA Length					
	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	lbs.	kg.
1800	104.8	2662	104.8	2662	32.8	833	29	737	50	1270	137.6	3495	28.3	719	1560 lbs	708 kg
2800	106.8	2713	116.8	2967	39.3	998	34	864	50	1270	146.1	3711	31.3	795	1744 lbs	791 kg
4600	116.8	2997	116.8	2967	44.7	1135	39	991	60	1524	161.4	4100	27.3	693	2018 lbs	915 kg
8500	128.8	3271	128.8	3272	54.7	1389	54	1372	60	1524	183.5	4661	28.3	719	2556 lbs	1159 kg
12600	145.8	3703	145.8	3703	68.1	1730	58	1473	75	1905	213.8	5431	30.3	770	3319 lbs	1505 kg

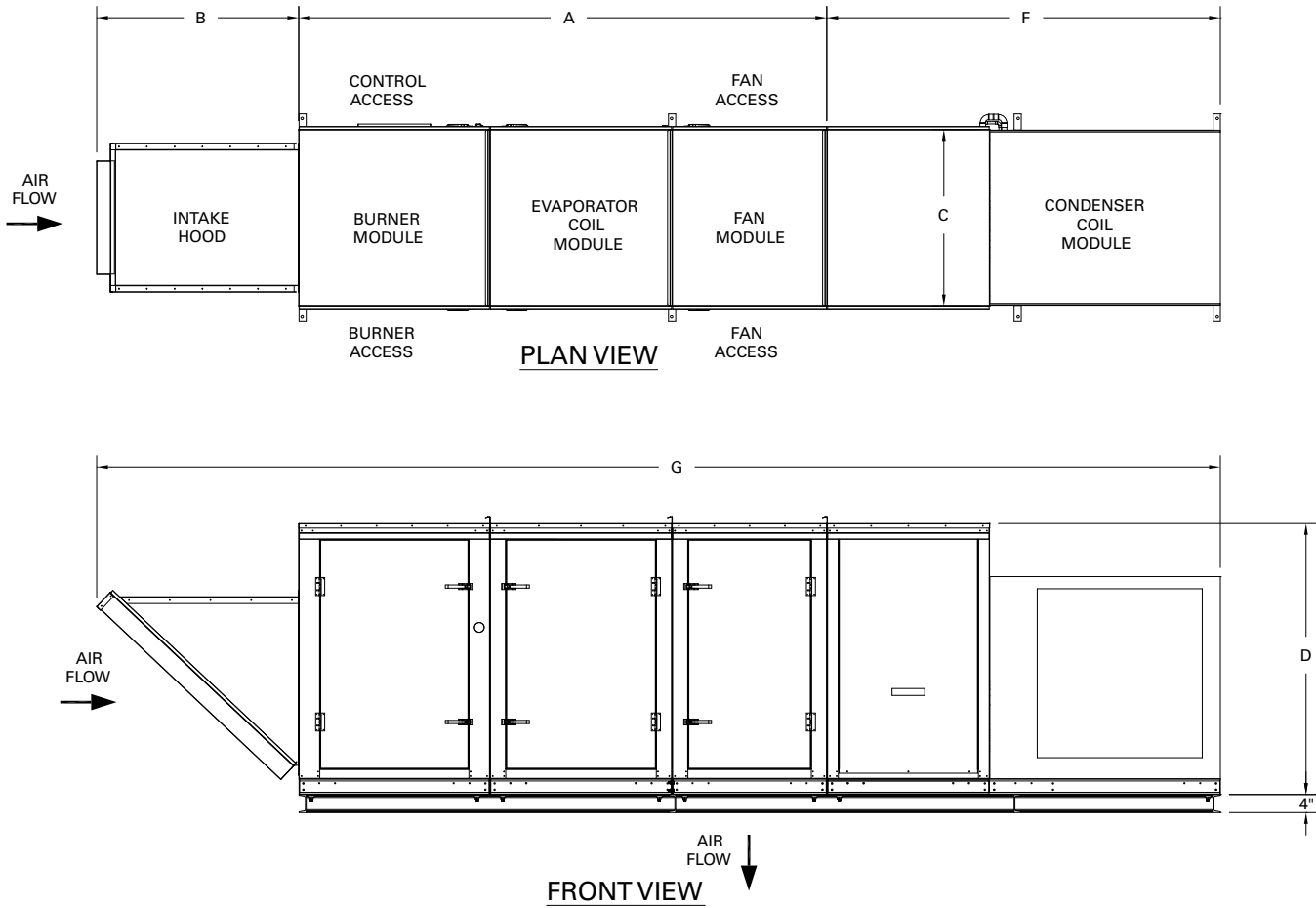
²MERV 8 filter module for indoor units only. MERV 8 filters installed in intake hood on outdoor units.

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

Dimensional Data

MUA-DGX with Packaged Condenser Unit

Form#: SS193_MUA-DGX-Direct Fire Make-up Air Unit with DX Cooling
Date: 05-2022 - Rev4



Model	Cooling Tons	(A)		(B)		(C)		(D)		(F)		(G)			
		Burner/Évap /Fan		Intake Hood		Housing Width		Housing Height		Length of Condenser Unit		OA Length ¹		OA Width	
		Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm	Inch	mm
1800	6 and 7.5	104.8	2662	32.8	833	29	737	50	1270	76.9	1953	215.5	5474	36	914
2800	6 and 7.5	116.8	2967	39.3	998	34	864	50	1270	77.1	1958	224.2	5695	40	1016
	10 and 12.5											234.2	5949		
4600	6 and 7.5	116.8	2967	44.7	1135	39	991	60	1524	86.9	2207	239.9	6093	40	1016
	10 and 12.5											249.3	6332		
8500	7.5	128.8	3272	54.7	1389	54	1372	60	1524	86.9	2207	261.4	6640	54	1371
	10 and 12.5											271.4	6894		

¹Dimension includes standard condenser unit hail guards

Standard Features

- Belt Drive, forward curved blower
- Rolled Steel, ODP Blower Motor
- 115, 208, 230, 460 or 575V, 60 Hz 1 or 3 phase
- ¼ h.p. to 15 h.p.
- Motorized intake damper
- Unit Mounted Discharge Temp. Controls
- Unit Mounted Call for Heat and Cooling
- Remote Start/Stop
- Unit mounted Non-Fused Disconnect
- Neoprene Fan Isolators
- End or Bottom discharge
- 1" Insulation, double wall
- G90 Galvanized, unpainted
- Stainless Steel drain and drain pan
- Halton cooling controls w/ evaporator freeze protection and compressor protection
- Expansion valves, sight glasses and filter-driers included

Options Available

- Direct Drive, Plenum Fan
- TEFC Blower Motor
- Intake Hood w/ 2" Alum. Mesh Filters, MERV 8 Filters & Bird Screen
- MERV 8 V-bank Dust Filter Module (Indoor Units Only)
- Anti-Corrosion Coating on Coil
- 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)
- Cooling Coil Moisture Eliminator
- Gas Pressure Gauges
- High and Low Gas Pressure Switches
- Gas Regulator (Field Installed)
- Paint

Specification

Supply a Halton model MUA-DGX-_____

non- recirculating direct fired gas heat with direct expansion cooling 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). DX cooling shall be performed by a Trane commercial grade condensing unit with dual compressors designed for R-410A refrigerant in either a remote split system configuration with the condensing shipped separate from the MUA unit for field installation and refrigerant charging or in a packaged unit configuration with the condensing unit factory installed, charged with R-410A and mounted with the MUA unit shipped as one assembly. Units specified as packaged shall be for outdoor installation only. The MUA unit shall be supplied complete with a Burner, DX Cooling 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 and a nominal cooling capacity of _____tons.

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 shall have 1" insulation covered with an interior steel shell. 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 insulated, removable access doors with hinges and gasket seals to allow access to the controls cabinet and burner.

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.

DX Cooling Module

The DX Cooling Module shall have a 20 ga. G90 galvanized steel exterior shell, 14 ga. G90 galvanized steel base and stainless steel DX cooling coil supports. The module shall have 1" insulation covered with an interior steel shell. The module construction shall be suitable for outdoor installation. The module shall have an integral stainless steel drain pan constructed to meet ASHRAE 62.1 and an external stainless steel condensate drain connection. For units specified as a remote split system, the DX Cooling Module shall have grommeted openings for field installed refrigerant piping. The module shall include insulated, removable access doors with hinges and gasket seals to allow access for field installation of refrigerant piping and service and maintenance of the DX cooling coil and refrigeration system components.

DX Cooling Components

The DX Cooling Module shall include a DX cooling coil of finned tube construction with copper tubes, aluminum fins, galvanized steel frame and brazed type connections. The DX cooling coil shall have counter flow circuiting and coils with multiple distributors and headers shall also have interlaced circuiting. For units specified as remote split systems, the DX cooling coil shall be shipped charged with dry nitrogen. Expansion valves, sight glasses and filter-driers shall be factory provided. When necessary, a moisture eliminator shall be provided on the DX cooling coil face to prevent condensate carry-over past the drain pan. For units specified as packaged, all factory installed refrigerant piping shall be structurally supported and all suction lines insulated.

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 shall have 1" insulation covered with an interior steel shell. The module construction shall be suitable for outdoor installation. The module shall include at least one removable, insulated 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.

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 cooling and/or start/stop or connections for a remote mounted call for heat and cooling and/or start/stop. For heating, the unit shall have an RTC Solutions control system to provide automatic control of the Burner to maintain the desired discharge air temperature set by either unit mounted, remote, or space temperature controller means. For cooling, the unit shall have a Halton control system to provide automatic control of the condensing unit compressors to maintain the desired discharge air temperature. Also, the cooling control system shall provide automatic evaporator freeze protection and compressor protection.

Optionally, the unit shall have gas heat 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

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 and optional replaceable MERV 8 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. aluminum 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