



Catalog 624-19

**Trailblazer®**  
**Air-Cooled Scroll Compressor Chillers**  
**With High Efficiency Variable Speed Fan Technology**

**Model AGZ-E**  
**030 to 241 Tons (100 to 840 kW)**  
**HFC-410A Refrigerant**  
**60/50 Hz**

**Year: 2020**  
**Size: 50 Tons**

**Model: AGZ050EPMUD-ER00**  
**Serial: STNU140100186**

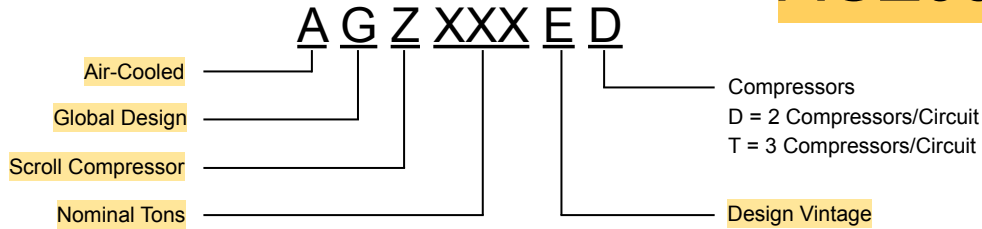


**L:8' W:3' H:8'**

**Shipping Weight: 3,106 lbs**  
**Operating Weight: 3,128 lbs**

CHILLER NOMENCLATURE

AGZ050EP



Unit Design Features

Daikin Trailblazer® air-cooled chillers are a product of our commitment to offer quiet, reliable, energy efficient equipment, incorporating high quality compressors, and innovative packaging.

Construction

Trailblazer® chillers are factory-assembled and mounted on a heavy-gauge steel base. The base distributes the unit weight for roof loading. Their small footprint allows smaller mounting pads or support structures and is a plus for retrofit or replacement applications.

Compressors

Reliable hermetic scroll compressors with cast iron scrolls and three Teflon® impregnated bearings are used on the Trailblazer® chillers to promote longevity.

Each model has the ability to modulate its capacity. Models with four compressors will have four steps of capacity modulation while models with six compressors will have six steps. Compressors stage on depending on the load of the system. This results in excellent part-load efficiency and reduced annual operating costs.

Features include motor temperature protection, scroll temperature protection, missing phase protection, reverse phase protection, low control circuit voltage protection, short cycling detection and alert, Modbus® communication to system controller, operational and fault history storage, and LED status display.

Evaporator

Trailblazer® units are designed to maximize efficiency in the smallest possible footprint. The evaporator is a compact, high efficiency, dual circuit, brazed plate-to-plate type heat exchanger consisting of parallel stainless steel plates. These heat exchangers provide excellent heat exchange efficiency in a compact footprint and are especially attractive for smaller capacity units. Evaporators are designed and constructed according to, and listed by, Underwriters Laboratories (UL).

Optional Remote Evaporator

Units 30-241 tons with the optional remote evaporator will have the evaporator shipped separately for field mounting and piping to the outdoor unit.

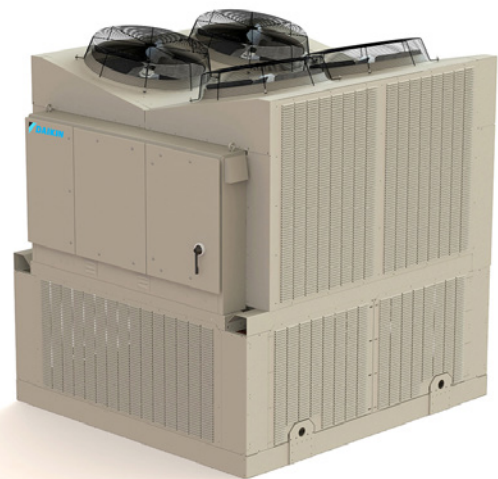
Condenser Coils

Condenser coils are all aluminum alloy microchannel design with a series of flat tubes containing multiple, parallel flow microchannels layered between the refrigerant manifold piping. See “Condenser Coil Options and Coating Considerations” on page 15 for discussion of environmental factors related to material and coating options.

Figure 1: Microchannel Coil



Figure 2: Trailblazer® with Optional Full Louver Package



**Table 16: Physical Data - AGZ030E - AGZ040E**

Physical Data	AGZ-E (Microchannel Packaged Chiller)					
	AGZ030E		AGZ035E		AGZ040E	
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2
<b>BASIC DATA</b>						
Unit Operating Charge lbs (kg) - Sealed Filter Drier	15 (16.8)	15 (16.8)	14 (6.4)	14 (6.4)	21 (9.5)	21 (9.5)
- Replaceable Core Filter Drier	17 (7.7)	17 (7.7)	16 (7.3)	16 (7.3)	23 (10.5)	23 (10.5)
<b>COMPRESSORS, SCROLL, HERMETIC</b>						
Nominal HP	7.5 / 7.5	7.5 / 7.5	9.0 / 9.0	10.0 / 10.0	10.0 / 10.0	10.0 / 10.0
Oil charge per Compressor, oz (g)	85 (2410)	85 (2410)	85 (2410)	85 (2410)	85 (2410)	85 (2410)
	85 (2410)	85 (2410)	85 (2410)	85 (2410)	85 (2410)	85 (2410)
Staging, 4 Stages (If Circuit is in Lead)	0-25-50-75-100	0-25-50-75-100	0-23-50-73-100	0-27-50-77-100	0-25-50-75-100	0-25-50-75-100
<b>CONDENSER, MICROCHANNEL</b>						
Coil Inlet Face Area, sq. ft. (sq. m.)	24.9 (2.3)	24.9 (2.3)	24.9 (2.3)	24.9 (2.3)	49.8 (4.6)	49.8 (4.6)
Rows Deep/Fins Per Inch	1 / 21	1 / 21	1 / 21	1 / 21	1 / 21	1 / 21
<b>CONDENSER FANS, DIRECT DRIVE PROPELLER</b>						
# of Fans per Circuit - Fan Diameter in. (mm)	2 - 30 (762)	2 - 30 (762)	2 - 30 (762)	2 - 30 (762)	2 - 30 (762)	2 - 30 (762)
Fan Motor, hp (kW) (for 208V,230V,460V/60Hz) <sup>1</sup>	1.5 (1.1)		1.5 (1.1)		1.5 (1.1)	
Fan & Motor RPM (for all 60Hz) <sup>1</sup>	1140		1140		1140	
Airflow, cfm (l/s) <sup>1</sup>	34,000 (16,047)		34,000 (16,047)		40,400 (19,067)	
<b>EVAPORATOR, BRAZED PLATE<sup>3</sup></b>						
Dry Weight lbs (kg)	84 (38.1)		91 (41.3)		98 (44.5)	
Water Volume, gallons (liters)	1.6 (6.1)		1.8 (6.8)		1.9 (7.2)	
Grooved inlet/outlet connection, in. (mm) <sup>2</sup>	2.5 (65)		2.5 (65)		2.5 (65)	
Max. Water Pressure, psi (kPa)	653 (4502)		653 (4502)		653 (4502)	
Max. Refrigerant Pressure, psi (kPa)	653 (4502)		653 (4502)		653 (4502)	

**Table 17: Physical Data - AGZ045E - AGZ055E**

Physical Data	AGZ-E (Microchannel Packaged Chiller)					
	AGZ045E		AGZ050E		AGZ055E	
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2
<b>BASIC DATA</b>						
Unit Operating Charge lbs (kg)	21 (9.5)	21 (9.5)	21 (9.5)	21 (9.5)	21 (9.5)	21 (9.5)
- Replaceable Core Filter Drier (Microchannel only)	23 (10.5)	23 (10.5)	23 (10.5)	23 (10.5)	23 (10.5)	23 (10.5)
<b>COMPRESSORS, SCROLL, HERMETIC</b>						
Nominal HP	12.0 / 12.0	12.0 / 12.0	13.0 / 13.0	13.0 / 13.0	13.0 / 13.0	15.0 / 15.0
Oil charge per Compressor, oz (g)	110 (3119)	110 (3119)	110 (3119)	110 (3119)	110 (3119)	110 (3119)
	110 (3119)	110 (3119)	110 (3119)	110 (3119)	110 (3119)	110 (3119)
Staging, 4 Stages (If Circuit is in Lead)	0-25-50-75-100	0-25-50-75-100	0-25-50-75-100	0-25-50-75-100	0-23-50-73-100	0-27-50-77-100
<b>CONDENSER, MICROCHANNEL</b>						
Coil Inlet Face Area, sq. ft. (sq. m.)	49.8 (4.6)	49.8 (4.6)	49.8 (4.6)	49.8 (4.6)	49.8 (4.6)	49.8 (4.6)
Rows Deep/Fins Per Inch	1 / 21	1 / 21	1 / 21	1 / 21	1 / 21	1 / 21
<b>CONDENSER FANS, DIRECT DRIVE PROPELLER</b>						
# of Fans per Circuit - Fan Diameter in. (mm)	2 - 30 (762)	2 - 30 (762)	2 - 30 (762)	2 - 30 (762)	2 - 30 (762)	2 - 30 (762)
Fan Motor, hp (kW) (for 208V,230V,460V/60Hz) <sup>1</sup>	1.5 (1.1)		1.5 (1.1)		1.5 (1.1)	
Fan & Motor RPM (for all 60Hz) <sup>1</sup>	1140		1140		1140	
Airflow, cfm (l/s) <sup>1</sup>	40,400 (19,067)		40,400 (19,067)		40,400 (19,067)	
<b>EVAPORATOR, BRAZED PLATE<sup>3</sup></b>						
Dry Weight lbs (kg)	112 (50.1)		126 (57.2)		133 (60.3)	
Water Volume, gallons (liters)	2.3 (8.7)		2.6 (9.8)		2.8 (10.6)	
Grooved inlet/outlet connection, in. (mm) <sup>2</sup>	2.5 (65)		2.5 (65)		2.5 (65)	
Max. Water Pressure, psi (kPa)	653 (4502)		653 (4502)		653 (4502)	
Max. Refrigerant Pressure, psi (kPa)	653 (4502)		653 (4502)		653 (4502)	

**NOTE:** 1) **Models 030-060:** Fan Motor hp = 2.0 for 380V/60Hz, 575V/60Hz, & 400V/50Hz.  
**All Models:** Fan RPM = 950 for 400V/50Hz. Airflow = (0.83 x 60Hz Airflow) for 400V/50Hz.  
2) Water connection shown is nominal pipe size.  
3) Brazed plate evaporators do not have drain or vent connections integral to the heat exchanger. The connections must be installed in the field inlet and outlet piping as shown in Piping Section in the current version of the Installation and Operation Manual, available on [www.DaikinApplied.com](http://www.DaikinApplied.com).

