



Catalog 624-10

Trailblazer™

Air-Cooled Scroll Compressor Chillers

With High Efficiency Variable Speed Fan Technology

Model AGZ, E Vintage

030 to 240 Tons (100 to 840 kW)

HFC-410A Refrigerant

60/50 Hz

2016

150 Tons

Model #: AGZ150EPMUJ-ER00

Serial #: STNU160800140

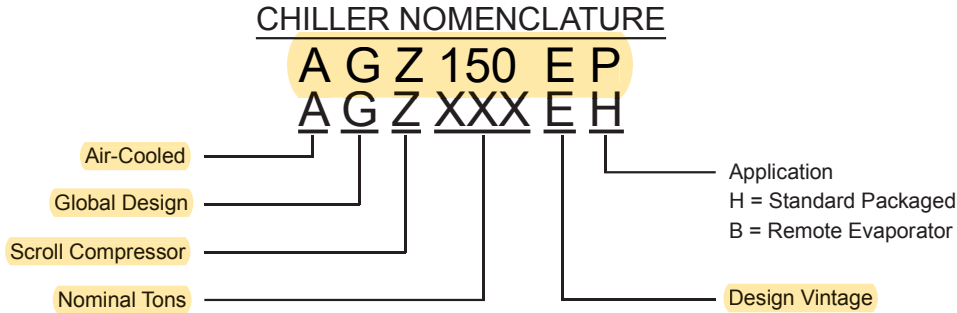


L: 19' 9"

W: 7' 4"

H: 8' 3"

Shipping Weight: 6,617 lbs
Operating Weight: 6,745 lbs



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. For unit models 030 to 180, 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).

Trailblazer™ models 190 to 240 are equipped with a direct expansion evaporator with copper tubes rolled into steel

tubesheets. The evaporators are single-pass on both the refrigerant and water sides for pure counter-flow heat exchange and low refrigerant and water pressure drops. Both attributes contribute to the heat exchanger effectiveness and total unit's outstanding efficiency. Two independent refrigerant circuits within the evaporator serve the unit's dual refrigerant circuits. Each evaporator is designed, constructed, inspected, and stamped in accordance with ASME requirements.

Optional Remote Evaporator

Units 30-70 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. A variety of optional coil materials and coatings are available so that the unit can be constructed to meet almost any environment. Packaged unit options include:

- copper tube/aluminum fins (30-70 ton models only)
- copper tube/copper fins (30-70 ton models only)
- copper tube/aluminum Black-fins (30-70 ton models only)
- ElectroFin® coating can be applied to any coil option

See "Condenser Coil Options and Coating Considerations" on page 13 for discussion of environmental factors related to material and coating options.

Figure 1: Microchannel Coil



Table 24: Physical Data - AGZ100E - AGZ120E

Physical Data	AGZ-E (Microchannel Packaged Chiller)					
	AGZ100E		AGZ110E		AGZ120E	
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2
BASIC DATA						
Unit Operating Charge lbs (kg) - Replaceable Core Filter Drier (Microchannel only)	49 (22.3)	49 (22.3)	64 (29.1)	64 (29.1)	65 (29.5)	65 (29.5)
COMPRESSORS, SCROLL, HERMETIC						
Nominal HP	25.0 / 25.0	25.0 / 30.0	30.0 / 25.0	25.0 / 30.0	30.0 / 30.0	30.0 / 30.0
Oil charge per Compressor , oz (g)	152 (4495)	152 (4495)	213 (6299)	152 (4495)	213 (6299)	213 (6299)
	152 (4495)	213 (6299)	152 (4495)	213 (6299)	213 (6299)	213 (6299)
Staging, 4 Stages (If Circuit is in Lead)	0-24-48-71-100	0-24-48-76-100	0-27-50-73-100	0-23-50-77-100	0-25-50-75-100	0-25-50-75-100
CONDENSER, MICROCHANNEL						
Coil Inlet Face Area, sq. ft. (sq. m.)	79.5 (7.4)	79.5 (7.4)	106 (9.9)	106 (9.9)	106 (9.9)	106 (9.9)
Rows Deep/Fins Per Inch	1 / 21	1 / 21	1 / 21	1 / 21	1 / 21	1 / 21
CONDENSER FANS, DIRECT DRIVE PROPELLER						
# of Fans per Circuit - Fan Diameter in (mm)	3 - 30 (762)	3 - 30 (762)	4 - 30 (762)	4 - 30 (762)	4 - 30 (762)	4 - 30 (762)
Fan Motor, hp (kW)	2.0 (1.5)		2.0 (1.5)		2.0 (1.5)	
Fan & Motor RPM (for all 60Hz) ¹	1140		1140		1140	
Airflow, cfm (l/s) ¹	67,740 (31,970)		90,320 (42,627)		90,320 (42,627)	
EVAPORATOR, BRAZED PLATE³						
Dry Weight lbs (kg)	317 (144)		339 (154)		369 (168)	
Water Volume, gallons (liters)	10.6 (41)		11.4 (44)		12.5 (48)	
Grooved inlet/outlet connection, in. (mm) ²	3.0 (77)		3.0 (77)		3.0 (77)	
Max. Water Pressure, psi (kPa)	650 (4482)		650 (4482)		650 (4482)	
Max. Refrigerant Pressure, psi (kPa)	650 (4482)		650 (4482)		650 (4482)	

Table 25: Physical Data - AGZ130E - AGZ161E

Physical Data	AGZ-E (Microchannel Packaged Chiller)							
	AGZ130E		AGZ140E		AGZ150E		AGZ161E	
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2
BASIC DATA								
Unit Operating Charge lbs (kg) - Replaceable Core Filter Drier (Microchannel only)	65 (29.5)	65 (29.5)	76 (34.5)	76 (34.5)	76 (34.5)	76 (34.5)	90 (40.9)	90 (40.9)
COMPRESSORS, SCROLL, HERMETIC								
Nominal HP	30.0 / 30.0	30.0 / 40.0	40.0 / 30.0	30.0 / 40.0	40.0 / 30.0	40.0 / 40.0	40.0 / 30.0	40.0 / 40.0
Oil charge per Compressor , oz (g)	213 (6299)	213 (6299)	213 (6299)	213 (6299)	213 (6299)	213 (6299)	213 (6299)	213 (6299)
	213 (6299)	213 (6299)	213 (6299)	213 (6299)	213 (6299)	213 (6299)	ea	ea
Staging, 4 Stages (If Circuit is in Lead)	0-23-46-69-100	0-23-46-77-100	0-29-50-71-100	0-21-50-79-100	0-27-50-73-100	0-27-53-80-100	0-25-50-75-100	0-25-50-75-100
CONDENSER, MICROCHANNEL								
Coil Inlet Face Area, sq. ft. (sq. m.)	106 (9.9)	106 (9.9)	132.4 (12.4)	132.4 (12.4)	132.4 (12.4)	132.4 (12.4)	132.4 (12.4)	132.4 (12.4)
Rows Deep/Fins Per Inch	1 / 21	1 / 21	1 / 21	1 / 21	1 / 21	1 / 21	1 / 21	1 / 21
CONDENSER FANS, DIRECT DRIVE PROPELLER								
# of Fans per Circuit - Fan Diameter in (mm)	4 - 30 (762)	4 - 30 (762)	5 - 30 (762)	5 - 30 (762)	5 - 30 (762)	5 - 30 (762)	5 - 30 (762)	5 - 30 (762)
Fan Motor, hp (kW)	2.0 (1.5)		2.0 (1.5)		2.0 (1.5)		2.0 (1.5)	
Fan & Motor RPM (for all 60Hz) ¹	1140		1140		1140		1140	
Airflow, cfm (l/s) ¹	90,320 (42,627)		112,900 (53,283)		112,900 (53,283)		112,900 (53,283)	
EVAPORATOR, BRAZED PLATE³								
Dry Weight lbs (kg)	406 (185)		435 (198)		465 (211)		465 (211)	
Water Volume, gallons (liters)	13.8 (53)		15.0 (57)		16.1 (61)		16.1 (61)	
Grooved inlet/outlet connection, in. (mm) ²	3.0 (77)		4.0 (102)		4.0 (102)		4.0 (102)	
Max. Water Pressure, psi (kPa)	650 (4482)		650 (4482)		650 (4482)		650 (4482)	
Max. Refrigerant Pressure, psi (kPa)	650 (4482)		650 (4482)		650 (4482)		650 (4482)	

NOTE:

- 1) **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.

Figure 35: AGZ140E - AGZ161E

