

Water-Cooled Scroll Compressor Chiller

Group: Chillers

Part Number: **IM1131-4**

Date: **July 2017**

WGZ030DW - WGZ200DW, Packaged Water-Cooled Chillers

WGZ030DA - WGZ200DA, Remote Condenser Chillers

30 - 200 Tons (105 - 700 kW)

50/60 Hz

R-410A

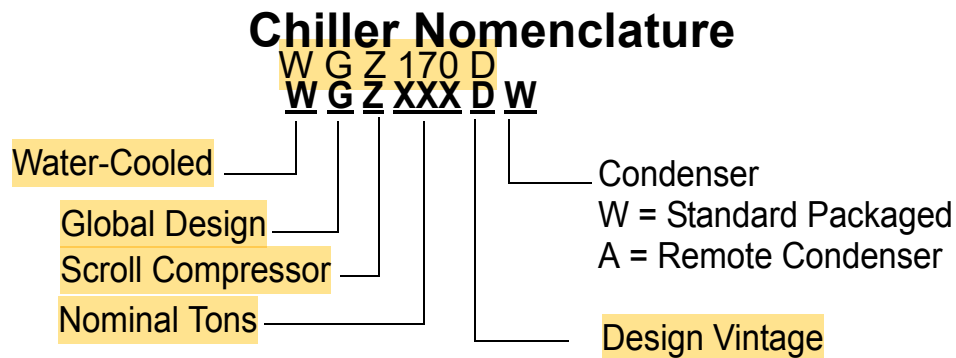
Model #: WGZ170D
Serial #: STNU200300173

Year: 2020
Size: 169 tons



Shipping Weight: 6,377 lbs.
Operating Weight: 7,214 lbs.

L: 9' W: 3' 5" H: 6' 5"



General Description

Daikin Applied WGZ water chillers are designed for indoor installations and are available with water-cooled condensers (Model WGZ-DW), or arranged for use with remote, air-cooled or evaporative condensers (Model WGZ-DA). Each water-cooled unit is completely assembled and factory wired before evacuation, charging and testing. They consist of hermetic scroll compressors, brazed-plate evaporators on Models WGZ 030 to 130 or shell-and-tube on Models WGZ 150 to 200, water-cooled condenser on Model WGZ-DW, and complete refrigerant piping.

Units manufactured for use with remote condensers (Models WGZ-DA) have all refrigerant specialties factory-mounted and connection points for refrigerant discharge and liquid lines.

Liquid line components that are included are manual liquid line shutoff valves, charging valves, filter-driers, liquid line solenoid valves, sight glass/moisture indicators, and expansion valves. Other features include compressor crankcase heaters, and a MicroTech II microprocessor controller.

The electrical control center includes all equipment protection and operating controls necessary for dependable automatic operation. Optional unit-mounted disconnect switch(es) may not be present, in which case a field-supplied and installed, fused disconnect switch is required.

Inspection

When the equipment is received, all items should be carefully checked against the bill of lading to be sure of a complete

shipment. All units must be carefully inspected for damage upon arrival. All shipping damage must be reported to the carrier and a claim must be filed with the carrier. The unit serial plate should be checked before unloading the unit to be sure that it agrees with the power supply available. Physical damage to unit after acceptance is not the responsibility of Daikin Applied.

Refrigerant Charge

Every model WGZ-DW water chiller with water-cooled condensers is shipped with a full refrigerant charge. For shipment, the charge is contained in the condenser and is isolated by the condenser liquid shutoff valve and the compressor discharge valve common to a pair of compressors.

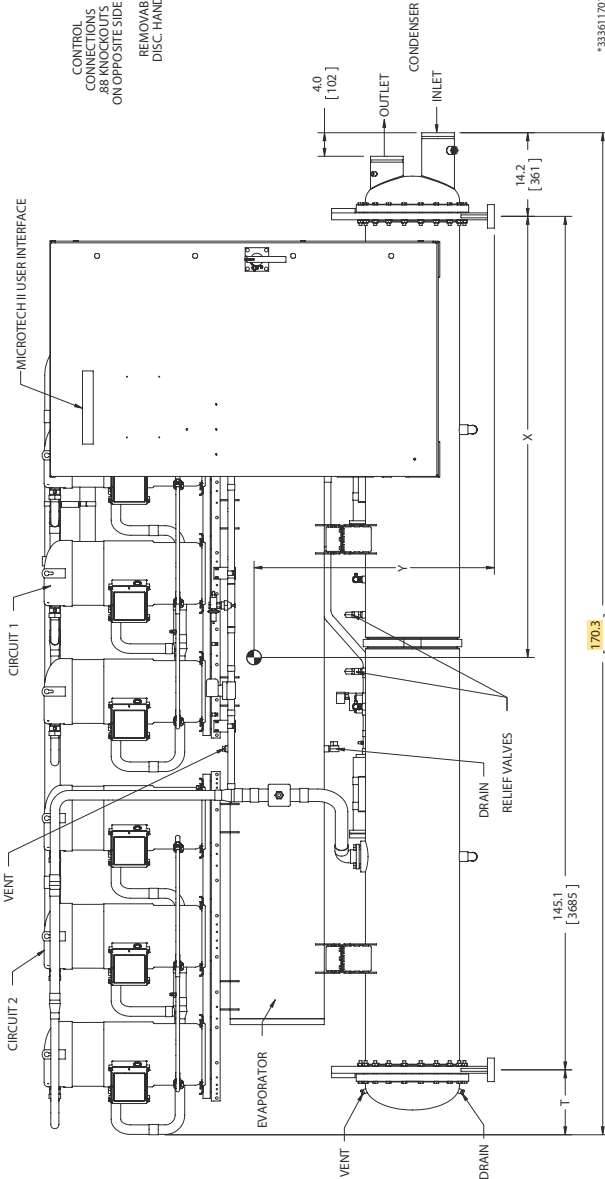
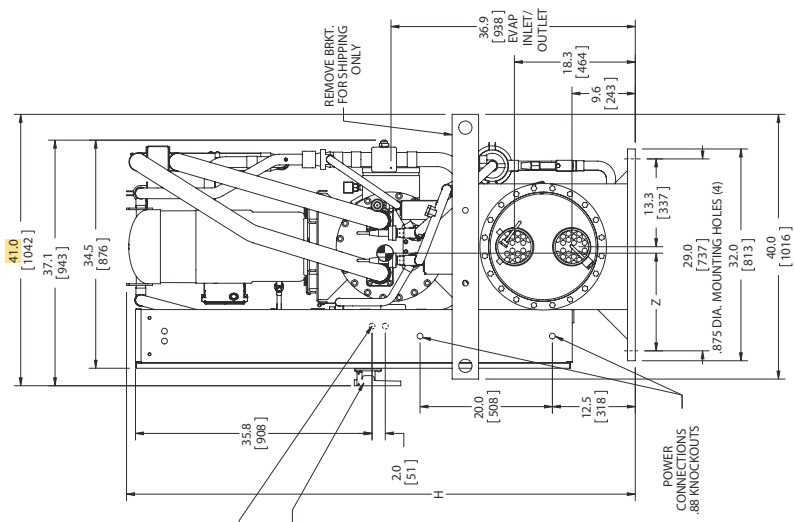
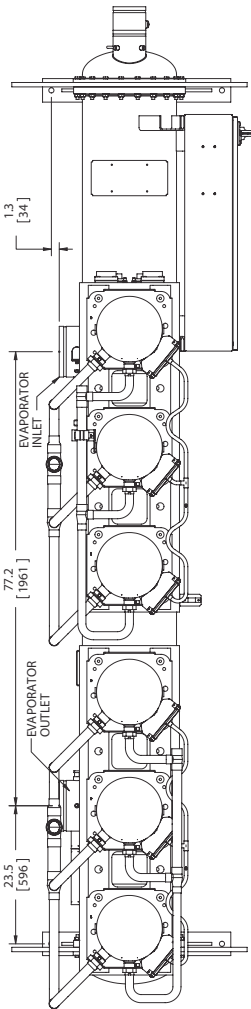
⚠ CAUTION

If the unit is damaged, allowing the refrigerant to escape, there can be danger of suffocation in the area since the refrigerant will displace the air. Be sure to review Environmental Protection Agency (EPA) requirements if damage occurs. Avoid exposing refrigerant to an open flame.

A holding charge of nitrogen/helium is supplied in remote condenser models, WGZ-DA and must be removed prior to charging with refrigerant. The operating charge must be field supplied and charged.

Figure 14: WGZ150DW - 200DW (Packaged)

WGZ MODEL NUMBER	MAXIMUM OVERALL HEIGHT IN (MM)	CHILLER WATER CONNECTION IN (MM) VICTAULIC SIZE (NOM)	CONDENSER WATER CONNECTION IN (MM) VICTAULIC SIZE (NOM)	CENTER OF GRAVITY			
	H			T	X	Y	Z
WGZ150DW	76.9 [1953]	8 (203)	5 (127)	11 (279)	76 (1905)	37.8 (960)	14.8 (376)
WGZ170DW	76.9 [1953]	8 (203)	5 (127)	10.9 (276)	77.7 (1974)	37.7 (968)	14.9 (379)
WGZ200DW	77.7 [1973]	8 (203)	5 (127)	10.9 (276)	77.9 (1979)	38.3 (973)	15 (381)



Physical Data - Packaged Units

Table 25: Physical Data - WGZ100D - WGZ130D

Physical Data (Packaged Chillers)	WGZ 100D		WGZ 115D		WGZ 130D	
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2
BASIC DATA						
Operating Weight- lb (kg)	4515 (2048)		4434 (2011)		4737 (2149)	
Shipping Weight- lb (kg)	4311 (1955)		4230 (1919)		4533 (2056)	
R410A Operating Charge- lb (kg)	90 (40.9)	90 (40.9)	100 (45.5)	100 (45.5)	100 (45.5)	100 (45.5)
COMPRESSORS, SCROLL, HERMETIC						
Nominal HP	26 / 26	26 / 26	26 / 30	26 / 30	30 / 30	30 / 30
Oil Charge, per Tandem Compressor Set - oz. (L)	290 (8.7)	290 (8.7)	358 (10.8)	358 (10.8)	426 (12.6)	426 (12.6)
4 Stages (Dependent on Lead Compressor)	25-50-75-100	25-50-75-100	22-44-72-100	22-44-72-100	25-50-75-100	25-50-75-100
CONDENSER						
Diameter- in. (mm)	14 (356)		14 (356)		14 (356)	
Tube Length- in. (mm)	120 (3048)		120 (3048)		120 (3048)	
Refrigerant Side Working Pressure- psig (kPa)	500 (3447)		500 (3447)		500 (3447)	
Water Side Working Pressure- psig (kPa)	232 (1599)		232 (1599)		232 (1599)	
Pump-Out Capacity- lb (kg) [90% Full at 90°F]	344.7 (156.7)		344.7 (156.7)		344.7 (156.7)	
Grooved Conn. In & Out- in. (mm)	4 (102)		4 (102)		4 (102)	
Relief Valve, Flare- in. (mm)	5/8 (15.9)		5/8 (15.9)		5/8 (15.9)	
Service Valve, Flare- in. (mm)	1/2 (12.7)		1/2 (12.7)		1/2 (12.7)	
Vent & Drain- in. (mm) NPT	1/4 (6.4)		1/4 (6.4)		1/4 (6.4)	
EVAPORATOR, BRAZED-PLATE						
Water Volume- gal (L)	8.0 (30.2)		9.6 (36.3)		10.8 (40.9)	
Refrigerant Side Working Pressure- psig (kPa)	653 (4500)		653 (4500)		653 (4500)	
Water Side Working Pressure- psig (kPa)	653 (4500)		653 (4500)		653 (4500)	
Grooved Conn. In & Out- in. (mm)	3 (76)		3 (76)		3 (76)	
Relief Valve, Flare- in. (mm)	5/8 (15.9)		5/8 (15.9)		5/8 (15.9)	
Vent & Drain	Field		Field		Field	

Table 26: Physical Data - WGZ150D - WGZ200D

Physical Data (Packaged Chillers)	WGZ 150D		WGZ 170D		WGZ 200D	
	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2	CIRCUIT 1	CIRCUIT 2
BASIC DATA						
Operating Weight- lb (kg)	6662 (3022)		7214 (3272)		7509 (3406)	
Shipping Weight- lb (kg)	5873 (2664)		6377 (2893)		6672 (3026)	
R410A Operating Charge- lb (kg)	150 (68.2)	150 (68.2)	150 (68.2)	150 (68.2)	150 (68.2)	150 (68.2)
COMPRESSORS, SCROLL, HERMETIC						
Nominal HP	26 / 26 / 26	26 / 26 / 26	26 / 26 / 26	30 / 30 / 30	30 / 30 / 30	30 / 30 / 30
Oil Charge, per Trio Compressor Set - oz. (L)	456 (13.7)	456 (13.7)	456 (13.7)	639 (19.2)	639 (19.2)	639 (19.2)
6 Stages (Dependent on Lead Compressor)	17-33-50-67-83-100	17-33-50-67-83-100	15-33-48-67-81-100	19-33-52-67-86-100	17-33-50-67-83-100	17-33-50-67-83-100
CONDENSER						
Diameter- in. (mm)	16 (406.4)		16 (406.4)		16 (406.4)	
Tube Length- in. (mm)	144 (3658)		144 (3658)		144 (3658)	
Refrigerant Side Working Pressure- psig (kPa)	500 (3447)		500 (3447)		500 (3447)	
Water Side Working Pressure- psig (kPa)	232 (1599)		232 (1599)		232 (1599)	
Pump-Out Capacity- lb (kg) [90% Full at 90°F]	572.3 (260.1)		508.9 (231.3)		508.9 (231.3)	
Grooved Conn. In & Out- in. (mm)	5 (127)		5 (127)		5 (127)	
Relief Valve, Flare- in. (mm)	5/8 (15.9)		5/8 (15.9)		5/8 (15.9)	
Service Valve, Flare- in. (mm)	1/2 (12.7)		1/2 (12.7)		1/2 (12.7)	
Vent & Drain- in. (mm) NPT	1/4 (6.4)		1/4 (6.4)		1/4 (6.4)	
EVAPORATOR, SHELL-AND-TUBE						
Water Volume- gal (L)	57.6 (218.0)		56.9 (215.4)		56.9 (215.4)	
Refrigerant Side Working Pressure- psig (kPa)	450 (3102)		450 (3102)		450 (3102)	
Water Side Working Pressure- psig (kPa)	150 (1034)		150 (1034)		150 (1034)	
Grooved Conn. In & Out- in. (mm)	8 (203)		8 (203)		8 (203)	
Relief Valve, Flare- in. (mm)	5/8 (15.9)		5/8 (15.9)		5/8 (15.9)	
Vent & Drain	1/2 (12.7)		1/2 (12.7)		1/2 (12.7)	