

Installation Instruction

Transport | Installation | Operation | Maintenance



Product line:	Commercial Air Coolers
Series description:	Cubic Compact High-Profile Cooler
Series:	GCCH

guntner.com/us

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1. Warranty statement

The supplier warrants the product to be free from defects in workmanship and materials under normal usage for the period outlined below. The supplier further warrants against defects in workmanship and materials of the product for a period of 24 months from the date of purchase (the "Warranty Period"), provided that the product is correctly installed and operated within the recommended limits of the manufacturer's technical documentation.

The supplier at its option shall repair or replace, free of charge to the purchaser, all components of the product which are or become defective during the Warranty Period as a result of defects in design, workmanship or materials, ordinary wear and tear excluded, provided, however, that:

- The product is applied correctly
- All operating and installation instructions for the product are complied with
- System component and piping design is in accordance with good refrigeration practice
- Nitrogen or an inert gas is introduced into the piping during the brazing of the piping installation

This warranty shall not include ordinary maintenance or cleaning of the product, or defects in the installation of the product. This warranty also does not cover physical damage to the product during transit, after purchase of the product but before installation.

The purchaser must request repair or replacement of the defective component through a written notice to the supplier, and must provide the purchaser with the time and opportunity to make such repair or replacement. Otherwise, the supplier will be freed from liability for the defect.

Any transport and exchange costs for the repair or replacement shall be borne by the purchaser. The supplier shall also not be liable for costs incurred in dismantling or fitting replacement parts or for any independent inspection undertaken by the purchaser. The purchaser shall return any allegedly defective goods, postage or freight paid, to the supplier at the address below. Upon receipt of the goods and inspection thereof the supplier shall repair or replace, at the supplier's discretion, the defective components and shall return the same to the purchaser, return postage and freight paid. This shall constitute full compliance of the supplier's warranty obligations hereunder.

The seller accepts no liability for the direct or indirect consequences of any modifications of or repairs to the product made out by the purchaser or by a third party without the prior consent of the supplier.

This warranty applies only to the repair or replacement of components of the product and expressly excludes responsibility for damage and consequential damages not occurring to the product itself.

This warranty is the purchaser's exclusive remedy. The supplier expressly acknowledges that it shall not be liable to the purchaser or any client of the purchaser for any direct or indirect damages, injury to persons or property or any consequential damage or loss of profits arising from defective goods or workmanship or from any other cause whatsoever.

To obtain warranty service or to ask any questions regarding the foregoing, please contact our office:

Güntner US LLC
3601 Algonquin Road Suite 925
Rolling Meadows, Illinois 60008
847- 781-0900 Tel
847-781-0901 Fax
dg-us-service@guntner.com or sales.us@Guntner.com
Online support: <https://www.guntner-solutions.us/contact>

2. General safety information

WARNING

All installation and maintenance procedures should be performed by qualified personnel already familiarized with the equipment.

WARNING

All field wiring should match the requirements of the equipment, as well as any local or national codes.

WARNING

Coil edges and other sharp objects should be met with caution, as they can cause serious injury. Fan blades are especially sharp, and therefore should be handled only while wearing protective gloves.

WARNING

All power sources should be disconnected before any type of service work is performed on the equipment. For cleaning the equipment, reinstall the drain pan after every cleaning session. Failure to follow these steps can result in damaged equipment or personal injury.

WARNING

Inhalation of certain refrigerants can be harmful, or even fatal. Failure to implement proper detection devices, ventilation, and procedures can result in serious injury or death. Ventilation of all refrigerants should follow all related regulations, as certain refrigerants are harmful to the environment. For more information, refer to any local or national codes that may apply.

WARNING

High temperatures can cause damage to the equipment. The expansion valve must be covered in heat absorbent material and the suction line sensor removed while brazing the refrigerant connections.

NOTICE

Never use the refrigeration compressor to evacuate the equipment. Never start the refrigeration compressor if it is in a vacuum.

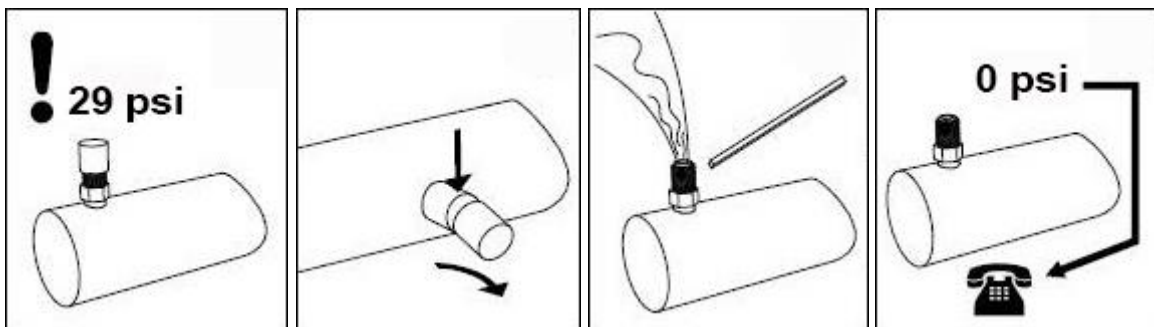
NOTICE

Fan motors are sealed and do not need lubrication.

3. Inspection

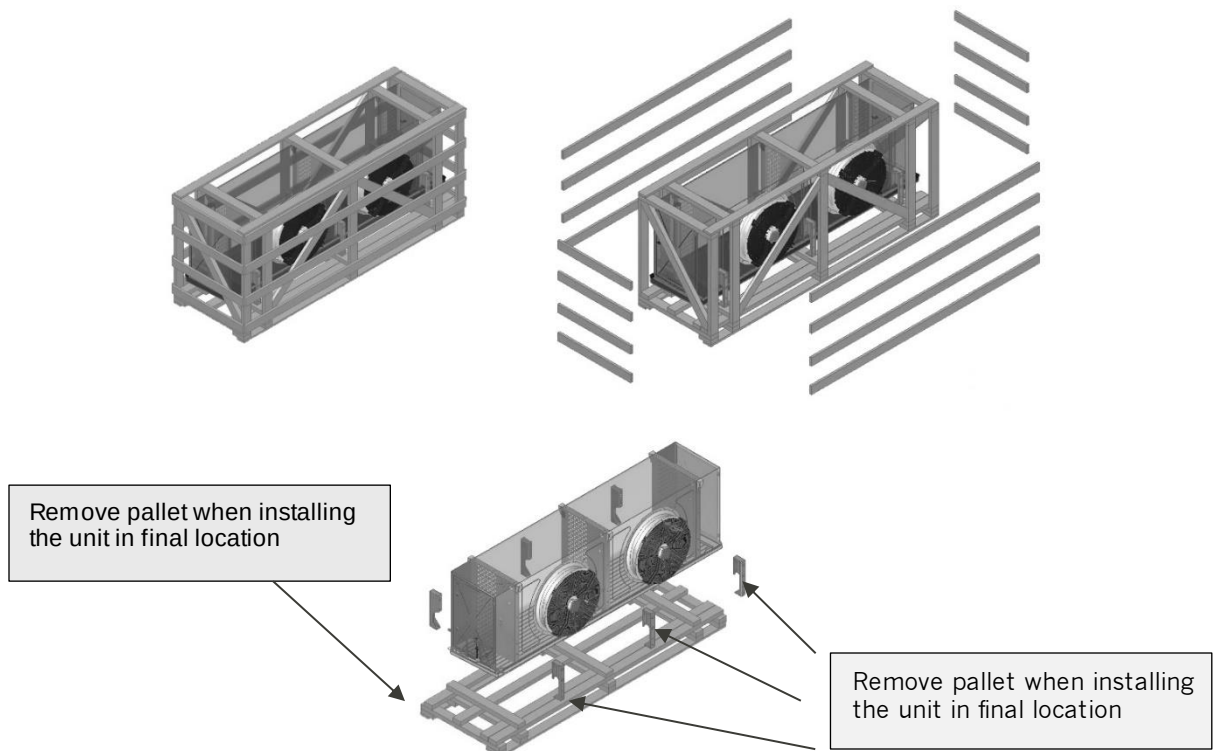
Every shipment must be thoroughly verified against the bill of lading at the time of receipt. The shipment receipt should not be signed until all items in the bill of lading have been recorded. Inspect thoroughly for any damage. Any shortage or damage must be reported to carrier. If the equipment has sustained damage during transportation, the transportation carrier shall be held responsible. Equipment should not be returned unless previous authorization has been issued by Güntner. The equipment is pressurized at 29 psi (2 Bar) with dry air during manufacture. If pressure loss occurs during transportation, please contact our Warranties department: sales.us@Guntner.com

For special requirements please contact our factory.



4. Unloading

Special care should be taken during unpacking or uncrating of equipment so as to prevent any damage or injury. Heavy equipment should remain on its original pallet until ready for final installation. When using lifting straps, make sure to use a spreader bar and make sure the straps do not compress or damage the equipment metal construction. When using a forklift, make sure that the unit is positioned as shown in the pictures below. Do not remove the pallet until equipment is located at the final installation location. Transportation legs should also be removed from the unit after the pallet is removed.

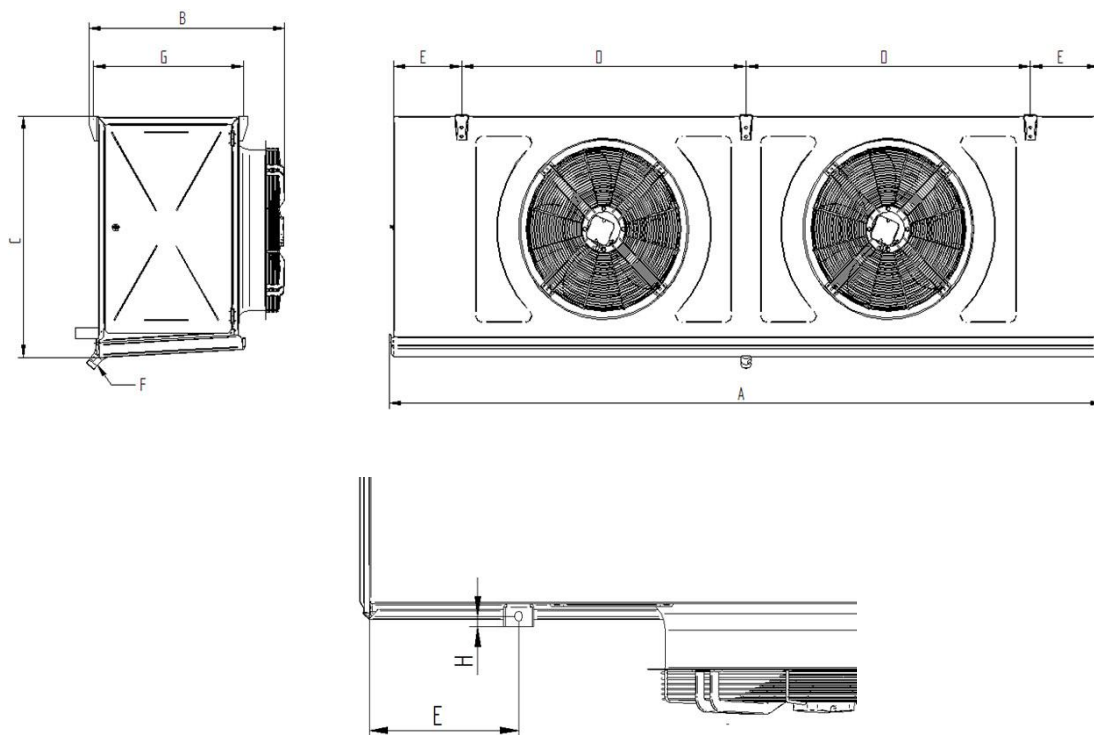


5. Mounting

The equipment may be mounted using galvanized steel threaded rod supports and/or bolts. Units should be hung with no inclination, make sure that the unit is perfectly level along and wide through drop levels or electronic levels, so that condensing drain works correctly. An appropriate flow of air through the unit is essential for efficient operation and to maintain warehouse design temperatures, for this purpose, unit installation should have clearance of 1.1 x unit height, from fan blade face (air input) to the closest wall. Never install an evaporator above a door; this will prevent ice accumulation in chambers at 2° Celsius temperatures or lower.

Dimensions

GCCH..A – GCCH..E – GCCH..D – GCCH..G – GCCH..F – GCCH..K – GCCH..H



Dimensions (inches-mm)							Bolt diameter for lifting support
B	C	D	E	F	G	H	
32 5/16" (821mm)	37 3/4" (958mm)	47 1/4" (1200mm)	11 5/16" (287mm)	Ø 1 1/4" NPT	25 1/16" (636mm)	3/4" (19mm)	3/8" (10mm)

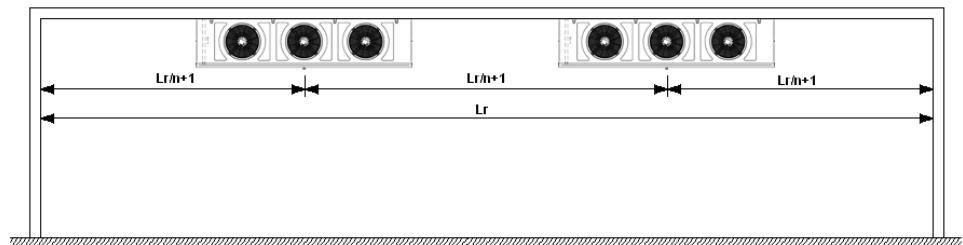
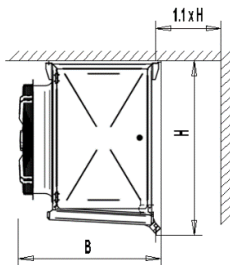
Model	Refrigerant volume		Connections		Approximate weight		Dimensions (inches – mm)
	lts	ft3	Coil inlet (OD)	Suction (OD)	lbs	kgs	A
Physical Information GCCH (Air Defrost - 6 FPI)							
GCCH 1000.0A_0A2	25.8	0.91	1 1/8	1 5/8	657	298	118 1/2" (3010mm)
GCCH 1200.0A_0A3	38.1	1.35	1 1/8	1 5/8	929	422	165 3/4" (4210mm)
GCCH 1400.0A_0A3	37.2	1.31	1 1/8	2 1/8	929	422	165 3/4" (4210mm)
GCCH 1600.0A_0A3	45.5	1.61	1 1/8	1 5/8	970	440	165 3/4" (4210mm)
GCCH 1800.0A_0A3	53.7	1.90	1 1/8	2 1/8	1010	458	165 3/4" (4210mm)
GCCH 2000.0A_0A4	70.4	2.49	1 1/8	2 1/8	1114	506	213" (5410mm)
GCCH 2200.0A_0A4	60.6	2.14	1 3/8	2 1/8	1247	566	213" (5410mm)
GCCH 2500.0A_0A4	69.3	2.45	1 3/8	2 5/8	1298	589	213" (5410mm)
GCCH 2800.0A_0A4	80.2	2.83	1 5/8	2 5/8	1349	612	213" (5410mm)

Model	Refrigerant volume		Connections		Approximate weight		Dimensions (inches – mm)
	lts	ft3	Coil inlet (OD)	Suction (OD)	lbs	kgs	A
Physical Information GCCH (Electric Defrost - 6 FPI)							
GCCH 1010.0E_7A2	31.9	1.13	1 3/8	2 1/8	750	340	118 1/2" (3010mm)
GCCH 1210.0E_7A2	42.0	1.48	1 1/8	2 1/8	817	371	118 1/2" (3010mm)
GCCH 1410.0E_7A3	47.2	1.67	1 3/8	2 1/8	1067	484	165 3/4" (4210mm)
GCCH 1610.0E_7A3	53.8	1.90	1 3/8	2 5/8	1121	509	165 3/4" (4210mm)
GCCH 1810.0E_7A4	70.2	2.48	1 3/8	2 5/8	1439	653	213" (5410mm)
GCCH 2010.0E_7A4	81.1	2.86	1 5/8	2 5/8	1504	683	213" (5410mm)
Physical Information GCCH (Electric Defrost - 4 FPI)							
GCCH 0820.0D_7A3	50.9	1.80	1 1/8	1 5/8	1077	489	165 3/4" (4210mm)
GCCH 1020.0D_7A3	59.0	2.08	1 1/8	1 5/8	1134	515	165 3/4" (4210mm)
GCCH 1320.0D_7A4	67.7	2.39	1 3/8	2 1/8	1386	629	213" (5410mm)
GCCH 1520.0D_7A4	77.3	2.73	1 3/8	2 1/8	1459	662	213" (5410mm)
GCCH 1720.0D_7A4	89.2	3.15	1 5/8	2 5/8	1525	692	213" (5410mm)
GCCH 1920.0D_7A4	97.7	3.45	2* 1 1/8	2 * 1 5/8	1593	723	213" (5410mm)
Physical Information GCCH (Electric Defrost - 4 FPI)							
GCCH 0930.0D_7A2	31.8	1.12	1 1/8	2 1/8	750	340	118 1/2" (3010mm)
GCCH 1030.0D_7A2	36.4	1.29	1 3/8	2 5/8	788	357	118 1/2" (3010mm)
GCCH 1230.0D_7A3	46.3	1.64	1 3/8	2 1/8	1067	484	165 3/4" (4210mm)
GCCH 1430.0D_7A3	53.8	1.90	1 3/8	2 5/8	1121	508	165 3/4" (4210mm)
GCCH 1630.0D_7A4	70.2	2.48	1 3/8	2 5/8	1445	656	213" (5410mm)
GCCH 1830.0D_7A4	81.1	2.86	1 5/8	2 5/8	1513	687	213" (5410mm)
Physical Information GCCH (Electric Defrost - 3 FPI)							
GCCH 0640.0F_7A2	34.2	1.21	1 3/8	2 1/8	748	339	118 1/2" (3010mm)
GCCH 0840.0F_7A2	39.9	1.41	1 3/8	2 1/8	785	356	118 1/2" (3010mm)
GCCH 1040.0F_7A3	50.9	1.80	1 3/8	2 1/8	1073	487	165 3/4" (4210mm)
GCCH 1240.0F_7A3	58.1	2.05	1 3/8	2 1/8	1125	510	165 3/4" (4210mm)
GCCH 1440.0F_7A3	68.2	2.41	1 5/8	2 5/8	1184	537	165 3/4" (4210mm)
GCCH 1640.0F_7A3	74.3	2.62	2 * 1 1/8	2 * 1 5/8	1231	558	165 3/4" (4210mm)
GCCH 1840.0F_7A4	97.7	3.45	2 * 1 1/8	2 * 1 5/8	1586	720	213" (5410mm)
GCCH 2040.0F_7A4	109.6	3.87	2 * 1 1/8	2 * 2 1/8	1654	750	213" (5410mm)
Physical Information GCCH (Hot Gas Defrost - 6 FPI)							
GCCH 0640.0F_7A2	34.2	1.21	1 3/8	2 1/8	748	339	118 1/2" (3010mm)
GCCH 0840.0F_7A2	39.9	1.41	1 3/8	2 1/8	785	356	118 1/2" (3010mm)
GCCH 1040.0F_7A3	50.9	1.80	1 3/8	2 1/8	1073	487	165 3/4" (4210mm)
GCCH 1240.0F_7A3	58.1	2.05	1 3/8	2 1/8	1125	510	165 3/4" (4210mm)
GCCH 1440.0F_7A3	68.2	2.41	1 5/8	2 5/8	1184	537	165 3/4" (4210mm)
GCCH 1640.0F_7A3	74.3	2.62	2 * 1 1/8	2 * 1 5/8	1231	558	165 3/4" (4210mm)
Physical Information GCCH (Hot Gas Defrost - 4 FPI)							
GCCH 0860.0K_1A3	50.9	1.80	1 1/8	1 5/8	1008	457	165 3/4" (4210mm)
GCCH 1060.0K_1A3	59.0	2.08	1 1/8	1 5/8	1051	477	165 3/4" (4210mm)
GCCH 1360.0K_1A4	67.7	2.39	1 3/8	2 1/8	1328	603	213" (5410mm)
GCCH 1560.0K_1A4	77.3	2.73	1 3/8	2 1/8	1382	627	213" (5410mm)
GCCH 1760.0K_1A4	89.2	3.15	1 5/8	2 5/8	1436	652	213" (5410mm)
GCCH 1960.0K_1A4	97.7	3.45	2* 1 1/8	2 * 1 5/8	1485	674	213" (5410mm)
Physical Information GCCH (Hot Gas Defrost - 4 FPI)							
GCCH 0970.0K_1A2	31.8	1.12	1 1/8	2 1/8	713	324	118 1/2" (3010mm)
GCCH 1070.0K_1A2	36.4	1.29	1 3/8	2 5/8	741	336	118 1/2" (3010mm)
GCCH 1270.0K_1A3	46.3	1.64	1 3/8	2 1/8	1012	459	165 3/4" (4210mm)
GCCH 1470.0K_1A3	53.8	1.90	1 3/8	2 5/8	1056	479	165 3/4" (4210mm)
GCCH 1670.0K_1A4	70.2	2.48	1 3/8	2 5/8	1368	621	213" (5410mm)
GCCH 1870.0K_1A4	81.1	2.86	1 5/8	2 5/8	1423	646	213" (5410mm)

Model	Refrigerant volume		Connections		Approximate weight		Dimensions (inches – mm)
	lts	ft3	Coil inlet (OD)	Suction (OD)	lbs	kgs	A
Physical Information GCCH (Hot Gas Defrost - 3 FPI)							
GCCH 0680.0H_1A2	34.2	1.21	1 3/8	2 1/8	714	324	118 1/2" (3010mm)
GCCH 0880.0H_1A2	39.9	1.41	1 3/8	2 1/8	745	338	118 1/2" (3010mm)
GCCH 1080.0H_1A3	50.9	1.80	1 3/8	2 1/8	1018	462	165 3/4" (4210mm)
GCCH 1280.0H_1A3	58.1	2.05	1 3/8	2 1/8	1060	481	165 3/4" (4210mm)
GCCH 1480.0H_1A3	68.2	2.41	1 5/8	2 5/8	1105	502	165 3/4" (4210mm)
GCCH 1680.0H_1A3	74.3	2.62	2 * 1 1/8	2 * 1 5/8	1142	518	165 3/4" (4210mm)
GCCH 1880.0H_1A4	97.7	3.45	2 * 1 1/8	2 * 1 5/8	1497	679	213" (5410mm)
GCCH 2080.0H_1A4	109.6	3.87	2 * 1 1/8	2 * 2 1/8	1552	704	213" (5410mm)

Mounting reference

GCCH..A – GCCH..E – GCCH..D – GCCH..G – GCCH..F – GCCH..K – GCCH..H



n = number of units install
Lr = room length

Notes

- Do not place cooler above or next to a door.
- Do not place product right in front of the cooler.
- Do not place coolers one in front of each other at a distance less than the air throw stated in technical specifications sheet.
- In case there are any units with electric defrost, make sure to leave a minimum clearance equal to the length of the unit on the electrical connection side to remove the electrical heaters in case of failure.
- Minimum distance between units must be 1 meter for hot gas and air defrost units.
- If there is no adequate space or the room is of a special construction, please contact our local sales office for assistance on unit mounting.
- The air cooler should have an air discharge clearance for air throw.

6. Refrigerant piping

The type, size and installation of piping must be according to the recommended and accepted practices for refrigeration applications. All low temperature piping must also be insulated to ASHARE standards. Traps must be used at suction in case the suction line is routed above the cooling unit.

7. Expansion valve

For direct expansion units, choose an expansion valve based on capacity information and on the requirements of the valve manufacturer. Expansion valves with external equalizer should be used. When temperature has reached design conditions, adjust the expansion valve in order to get 8 - 10°F of superheat at the suction line. Expansion valves must be installed the manufacturer's specific recommendations. Units requiring an expansion valve with external equalizer must have that line connected. Properly locating the bulb is extremely important for proper coil operation. Good thermal contact with suction line is also essential. On soldered on valves, wrap a wet cloth around the valve during installation to protect it from overheating and damage. On multiple evaporator systems, the piping must be placed so that the flow of any valve does not affect another valve's bulb.

8. Drain line

Drain line. All drain lines exposed to freezing temperatures must be fitted with heaters and be insulated. Drain line traps must be also heated to prevent freezing on both the drain line and the trap. Drain line should have a slope level and look for the nearest exit.

9. Wiring

All wiring must be performed in strict compliance with local and national electrical codes. Fans, local insulation, electrical heaters and controllers must be wired in accordance to the electrical wiring diagrams provided. Only properly sized copper conductors should be used. All electrical installation work must be performed by qualified and authorized personnel.

WARNING

For thermal protection of the motor, the thermal contacts installed must be used and wired in accordance to the circuit diagram affixed to the unit.

WARNING

Use wires as specified to 600V, normally terminations are:

60°C (140°F) for nominal terminals lower than 100 amperes

75°C (167°F) for nominal terminals of 100 amperes or higher

Use only an adequate size copper conductor.

The unit should be adequately connected to physical ground.

Wiring on field should meet local and domestic standards.

10. Installation

Installation and maintenance of this equipment must be conducted only by qualified personnel familiar with this type of machinery. The equipment is pressurized with dry air at maximum 29 psig, please remove internal pressure of the equipment prior to unit connection to system. Vacuum should be made over the whole equipment before charging system with the refrigerant. All field wiring must be verified and be made according to equipment requirements and in compliance with all local and national codes. Use the electrical information in the name plate to determine the size of conductors and fuses. Avoid contact with sharp edges or any sharp coil surfaces because they represent potential for injury. Make sure all power sources have been disconnected prior to performing any service work in the equipment.

WARNING

Before starting up the unit, make sure all accessible electrical parts are secured.

11. Vacuum

Proper vacuum is essential prior to charging refrigerant into the system. This prevents many problems that might arise due to lack of care in this step. The system must be verified in all cycles to ensure proper operation.

12. Start - up

When starting up, the next steps should be taken:

- Verify all threaded connections.
- Verify electrical connections to motors, heaters and additional components if applicable.
- Run the fans and verify rotation direction. Make sure there is no transport damage.
- During the test, observe the equipment and pay attention to the following:
 - Silent operation of fans (bearings, contacts, balance)
 - Electrical motor power requirements
 - Verify there are no leaks
 - Adjust expansion valve for correct overheating
- After 48 hours of operation, verify equipment again, especially the rotating parts.

13. Maintenance and service

WARNING

Disconnect all power sources prior to servicing!

13.1 Fans and heaters

The only electrical components that are prone to malfunctioning are fans, motors and electrical heaters. In case of motor or heater failure, the affected part should be removed from the unit and tested separately. If the motor and/or heaters still do not work, they must be replaced.

13.2 Drain pan

Periodic inspection of the drain pan is recommended. Build-up of dirt and dust must be cleaned using soap and hot water. If there are any apparent signs of improper drainage, the slope of the drain line, the heater of the drain line (if applicable) and the drain trap must be checked for proper operation. The unit may be cleaned using soap and hot water. Special care must be given to the unit's electrical areas including the motor, wiring and junction box. Water may damage the electrical motor.

13.3 Inspection and maintenance

Verify the following items when conducting a visual inspection of the equipment:

- Secure threaded connections
- Leaks
- Silent fan operation
- General unit condition, such as cleanliness and corrosion.

Finned heat exchanger cleaning is extremely important to ensure proper equipment operation and long service life.

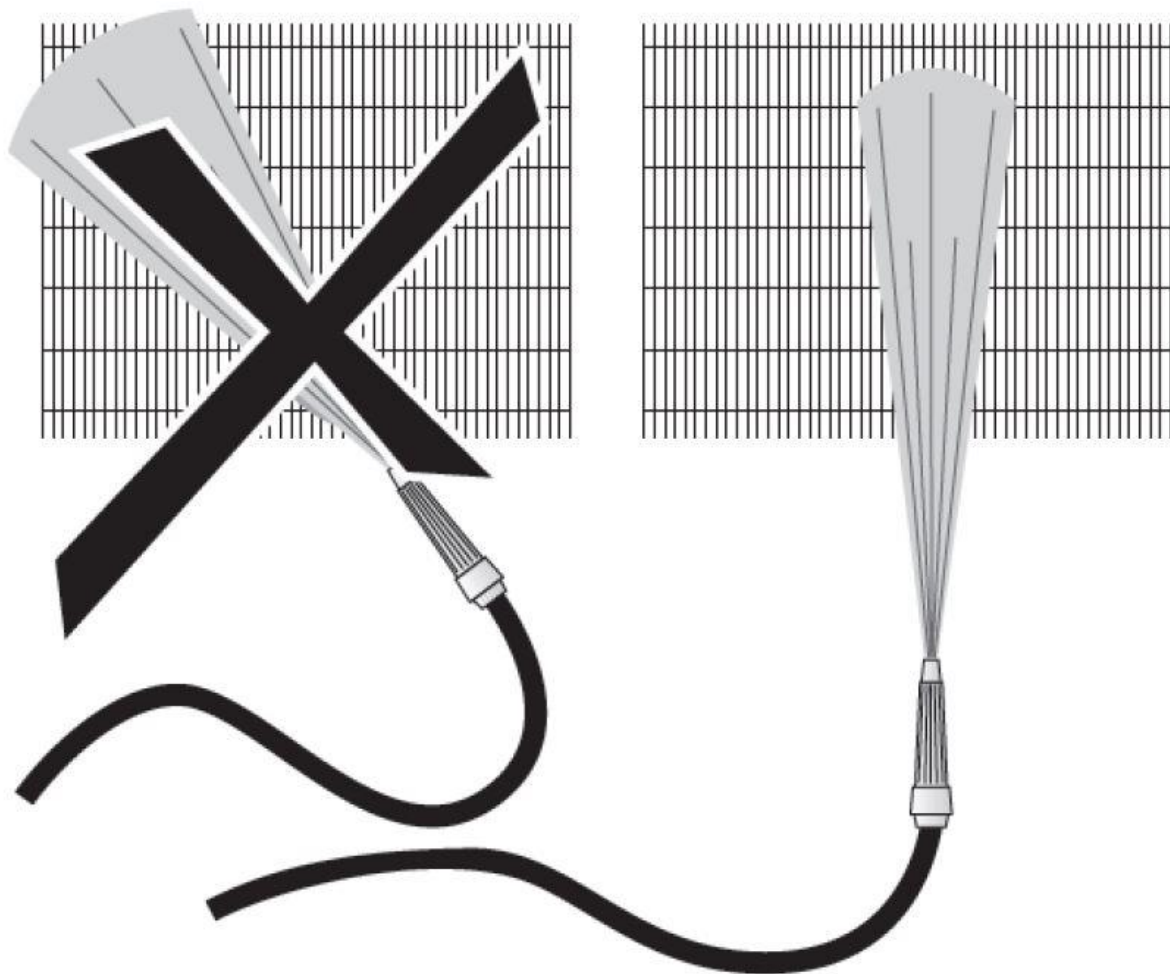
- There is no rule of thumb on how often cleaning must be performed. Cleaning frequency and method depend on the client and must be determined by client's operating personnel. If necessary, ice must be defrosted using a hot air dryer or hot water at 15 – 25 Celsius degrees temperature. Never remove ice mechanically with metallic or pointed items.

- The equipment is always delivered clean. If, during installation and/or during the first hours of operations dirt builds up to such an extent that it might affect equipment capacity, the unit must be cleaned before starting operation.

In order to clean the unit, **it must be turned off and all power sources must be disconnected.**

Hydraulic cleaning of heat exchanger

- For deposits containing oil, detergent may be added to water. Make sure not to deform fins.
- When cleaning with liquid or compressed air, fans must be turned off. Do not spray directly.
- Clean the coil from top to bottom so dirt flows downwards. Cleaning must continue until all dirt has been removed.
- **Always clean/spray towards the fins.**
- **Never clean at 90° to the fins!**
- Maximum allowed vapor pressure: 6 bar.
- Maximum allowed water pressure allowed before the outlet: 80 to 100 bar.



Preventive maintenance for commercial evaporators	As Required	Every Month	Every 3 Months	Every 6 Months	Every Year
CLEAN using a brush, pressurized water or mild detergent. Make sure the product being used is appropriate for this application. NEVER USE ACID-BASED CLEANER.	X				
CHECK that fans rotate freely and quietly.		X			
REPLACE any motor if it vibrates or makes unusual noise.	X				
INSPECT the unit for unusual vibrations in fans or housing. Identify the fan that is causing vibration.		X			
INSPECT the drain pan to make sure the drain is free from obstructions, including ice buildup.		X			
INSPECT for ice buildup on the coil.		X			
CHECK defrost controller calibration.	X		X		
CHECK that heaters are working properly during defrost, Including the heater of drain piping.			X		
VERIFY heater power consumption by comparing it to the data in the electrical diagram				X	
CHECK that the drain line is working properly.		X			
CHECK that all fan screws are tight. Tighten them if necessary.				X	
CHECK that there is no corrosion in fins, pan, housing, soldered joints or copper pipes.					X
CHECK that there are no grease stains in coil headers, return bends or fins.					X
VERIFY there are no possible leaks.					X
CHECK that wiring is in good conditions and protected. Replace protection if necessary.					X
CHECK that all ground connections are tight.					X

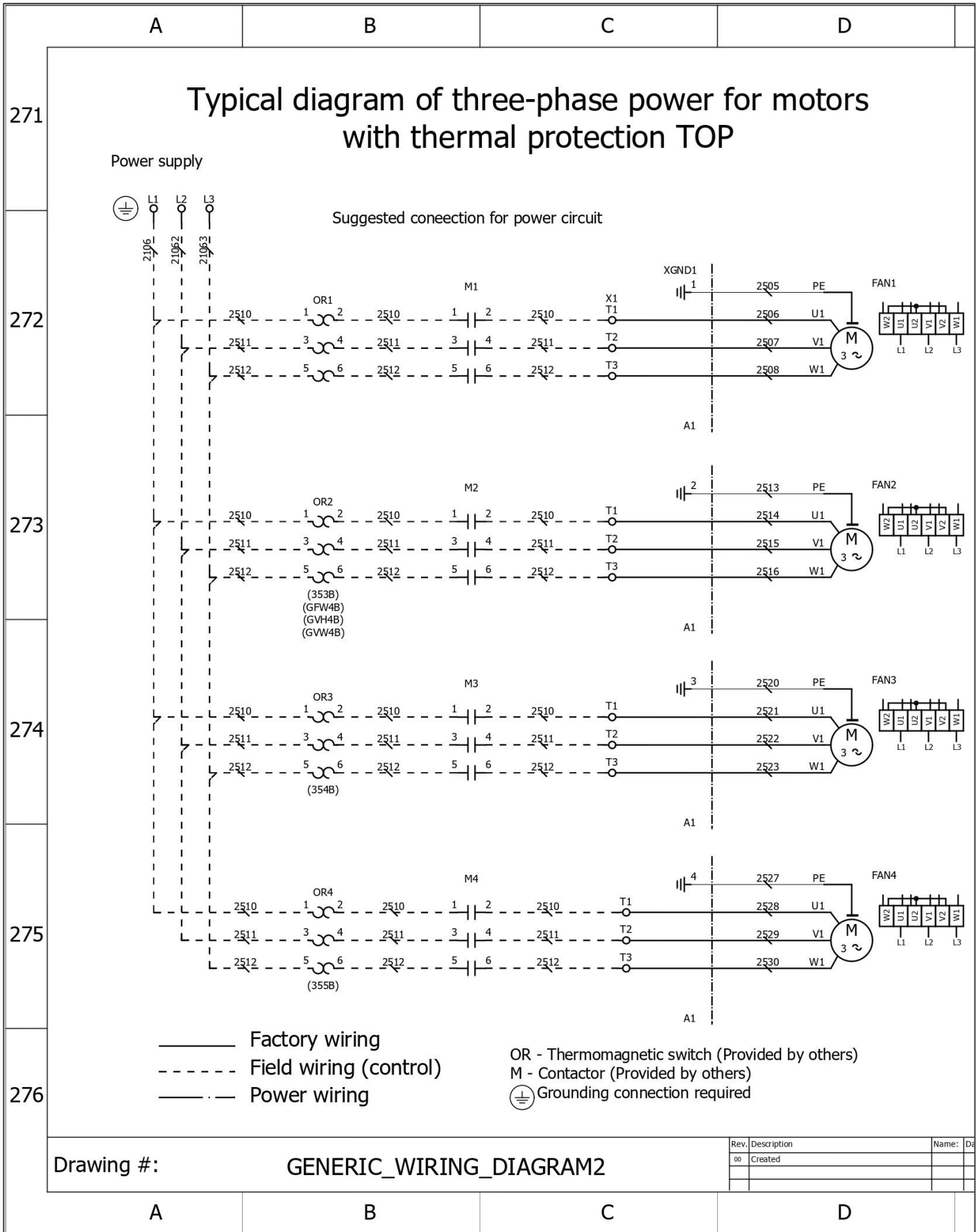
14. Electrical data

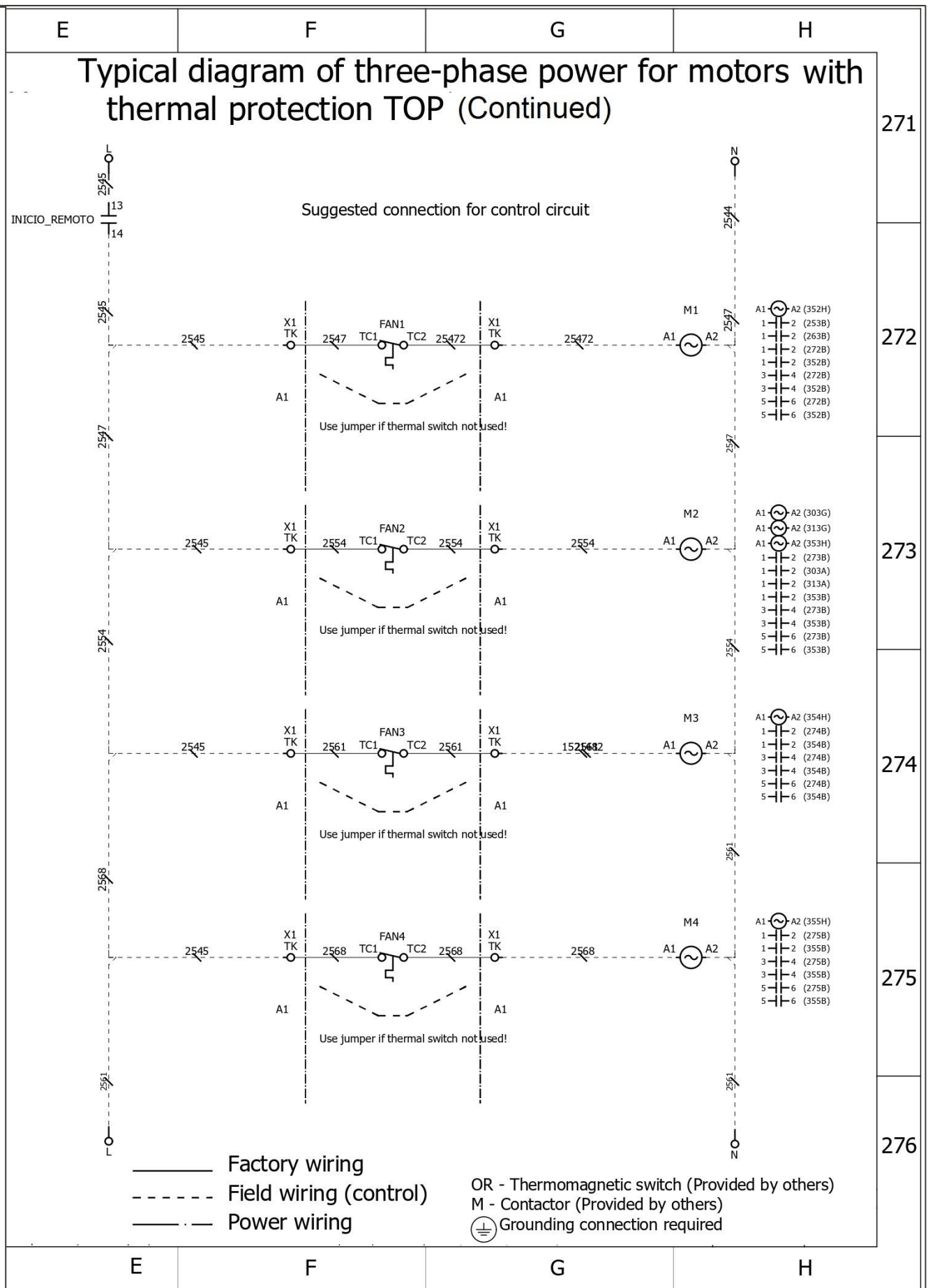
Model	Fans	Motor						Motor					
		460 V / 3 Ph / 60 Hz						230 V / 3 Ph / 60 Hz					
		Fan model	Fan diameter	Fan speed	Watts	Amps	Total amps	Fan model	Fan diameter	Fan speed	Watts	Amps	Total amps
GCCH 1000.0A_0A2	2	VT03204U	630	1050	860	1.5	3.0	VT03204U	630	1000	790	2.6	5.2
GCCH 1200.0A_0A3	3	VT03204U	630	1050	860	1.5	4.5	VT03204U	630	1000	790	2.6	7.8
GCCH 1400.0A_0A3	3	VT03204U	630	1050	860	1.5	4.5	VT03204U	630	1000	790	2.6	7.8
GCCH 1600.0A_0A3	3	VT03204U	630	1050	860	1.5	4.5	VT03204U	630	1000	790	2.6	7.8
GCCH 1800.0A_0A3	3	VT03204U	630	1050	860	1.5	4.5	VT03204U	630	1000	790	2.6	7.8
GCCH 2000.0A_0A4	4	VT03204U	630	1050	860	1.5	6.0	VT03204U	630	1000	790	2.6	10.4
GCCH 2200.0A_0A4	4	VT03204U	630	1050	860	1.5	6.0	VT03204U	630	1000	790	2.6	10.4
GCCH 2500.0A_0A4	4	VT03204U	630	1050	860	1.5	6.0	VT03204U	630	1000	790	2.6	10.4
GCCH 2800.0A_0A4	4	VT03204U	630	1050	860	1.5	6.0	VT03204U	630	1000	790	2.6	10.4

Model	Fans	Fan model	Fan diameter	Motor					Heaters		Motor					Heaters		
				460 V / 3 Ph / 60 Hz							230 V / 3 Ph / 60 Hz							
				Fan speed	Watts	Amps	Total amps	Watts	Circuit 1 amp	Circuit 2 amp	Fan speed	Watts	Amps	Total amps	Watts	Circuit 1 amp	Circuit 2 amp	Circuit 3 amp
Electric Information GCCH (Electric Defrost - 6 FPI)																		
GCCH 1010.0E_7A2	2	VT03204U	630	1,050	860	1.5	3.0	19,800	24.85	N/A	1000	790	2.6	5.2	19800	24.85	24.85	N/A
GCCH 1210.0E_7A2	2	VT03204U	630	1,050	860	1.5	3.0	25,300	33.13	N/A	1000	790	2.6	5.2	25300	33.13	33.13	N/A
GCCH 1410.0E_7A3	3	VT03204U	630	1,050	860	1.5	4.5	28,500	33.89	N/A	1000	790	2.6	7.8	28500	33.89	33.89	N/A
GCCH 1610.0E_7A3	3	VT03204U	630	1,050	860	1.5	4.5	33,000	45.18	N/A	1000	790	2.6	7.8	33000	45.18	45.18	N/A
GCCH 1810.0E_7A4	4	VT03204U	630	1,050	860	1.5	6.0	44,000	30.12	30.12	1000	790	2.6	10.4	44000	37.90	37.90	45.18
GCCH 2010.0E_7A4	4	VT03204U	630	1,050	860	1.5	6.0	48,000	30.12	30.12	1000	790	2.6	10.4	48000	45.18	45.18	45.18
Electric Information GCCH (Electric Defrost - 4 FPI)																		
GCCH 0820.0D_7A3	3	VT03204U	630	1,050	860	1.5	4.5	25,200	33.45	N/A	1000	790	2.6	7.8	25,200	31.74	35.17	N/A
GCCH 1020.0D_7A3	3	VT03204U	630	1,050	860	1.5	4.5	28,800	37.84	N/A	1000	790	2.6	7.8	28,800	36.15	39.54	N/A
GCCH 1320.0D_7A4	4	VT03204U	630	1,050	860	1.5	6.0	33,500	46.68	N/A	1000	790	2.6	10.4	33,500	44.96	48.39	N/A
GCCH 1520.0D_7A4	4	VT03204U	630	1,050	860	1.5	6.0	38,600	32.22	21.28	1000	790	2.6	10.4	38,600	32.22	32.22	41.8
GCCH 1720.0D_7A4	4	VT03204U	630	1,050	860	1.5	6.0	42,000	38.41	21.28	1000	790	2.6	10.4	42,000	38.41	38.41	41.8
GCCH 1920.0D_7A4	4	VT03204U	630	1,050	860	1.5	6.0	47,100	44.96	21.28	1000	790	2.6	10.4	47,100	44.96	44.96	41.8
Electric Information GCCH (Electric Defrost - 4 FPI)																		
GCCH 0930.0D_7A2	2	VT03203U	630	1,610	3,150	5.1	10.2	17,600	24.85	N/A	1550	2960	9.2	18.4	17,600	24.85	24.85	N/A
GCCH 1030.0D_7A2	2	VT03203U	630	1,610	3,150	5.1	10.2	19,800	24.85	N/A	1550	2960	9.2	18.4	19,800	24.85	24.85	N/A
GCCH 1230.0D_7A3	3	VT03203U	630	1,610	3,150	5.1	15.3	25,500	33.89	N/A	1550	2960	9.2	27.6	25,500	33.89	33.89	N/A
GCCH 1430.0D_7A3	3	VT03203U	630	1,610	3,150	5.1	15.3	28,500	39.67	N/A	1550	2960	9.2	27.6	28,500	39.67	39.67	N/A
GCCH 1630.0D_7A4	4	VT03203U	630	1,610	3,150	5.1	20.4	40,000	30.12	30.12	1550	2960	9.2	36.8	40,000	37.90	37.9	30.12
GCCH 1830.0D_7A4	4	VT03203U	630	1,610	3,150	5.1	20.4	44,000	30.12	30.12	1550	2960	9.2	36.8	44,000	37.90	37.9	45.18
Electric Information GCCH (Electric Defrost - 3 FPI)																		
GCCH 0640.0F_7A2	2	VT03203U	630	1,610	3,150	5.1	10.2	14,300	21.46	N/A	1550	2960	9.2	18.4	14300	39.61	N/A	N/A
GCCH 0840.0F_7A2	2	VT03203U	630	1,610	3,150	5.1	10.2	16,100	21.46	N/A	1550	2960	9.2	18.4	16100	42.93	N/A	N/A
GCCH 1040.0F_7A3	3	VT03203U	630	1,610	3,150	5.1	15.3	21,600	28.81	N/A	1550	2960	9.2	27.6	21600	27.11	30.51	N/A
GCCH 1240.0F_7A3	3	VT03203U	630	1,610	3,150	5.1	15.3	24,000	28.81	N/A	1550	2960	9.2	27.6	24000	27.11	30.51	N/A
GCCH 1440.0F_7A3	3	VT03203U	630	1,610	3,150	5.1	15.3	27,600	37.84	N/A	1550	2960	9.2	27.6	27600	36.15	39.54	N/A
GCCH 1640.0F_7A3	3	VT03203U	630	1,610	3,150	5.1	15.3	30,000	37.84	N/A	1550	2960	9.2	27.6	30000	36.15	39.54	N/A
GCCH 1840.0F_7A4	4	VT03203U	630	1,610	3,150	5.1	20.4	42,000	38.41	21.28	1550	2960	9.2	36.8	42000	38.41	38.41	41.8
GCCH 2040.0F_7A4	4	VT03203U	630	1,610	3,150	5.1	20.4	45,400	38.41	21.28	1550	2960	9.2	36.8	45400	38.41	38.41	48.39

Model	Fans	Fan model	Fan diameter	Motor				Motor			
				460 V / 3 Ph / 60 Hz				230 V / 3Ph / 60 Hz			
				Fan speed	Watts	Amps	Total amps	Fan speed	Watts	Amps	Total amps
Electric Information GCCH (Hot Gas Defrost - 6 FPI)											
GCCH 1050.0G_1A2	2	VT03204U	630	1050	860	1.5	3.0	1000	790	2.6	5.2
GCCH 1250.0G_1A2	2	VT03204U	630	1050	860	1.5	3.0	1000	790	2.6	5.2
GCCH 1450.0G_1A3	3	VT03204U	630	1050	860	1.5	4.5	1000	790	2.6	7.8
GCCH 1650.0G_1A3	3	VT03204U	630	1050	860	1.5	4.5	1000	790	2.6	7.8
GCCH 1850.0G_1A4	4	VT03204U	630	1050	860	1.5	6.0	1000	790	2.6	10.4
GCCH 2050.0G_1A4	4	VT03204U	630	1050	860	1.5	6.0	1000	790	2.6	10.4
Electric Information GCCH (Hot Gas Defrost - 4 FPI)											
GCCH 0860.0K_1A3	3	VT03204U	630	1050	860	1.5	4.5	1000	790	2.6	7.8
GCCH 1060.0K_1A3	3	VT03204U	630	1050	860	1.5	4.5	1000	790	2.6	7.8
GCCH 1360.0K_1A4	4	VT03204U	630	1050	860	1.5	6	1000	790	2.6	10.4
GCCH 1560.0K_1A4	4	VT03204U	630	1050	860	1.5	6	1000	790	2.6	10.4
GCCH 1760.0K_1A4	4	VT03204U	630	1050	860	1.5	6	1000	790	2.6	10.4
GCCH 1960.0K_1A4	4	VT03204U	630	1050	860	1.5	6	1000	790	2.6	10.4
Electric Information GCCH (Hot Gas Defrost - 4 FPI)											
GCCH 0970.0K_1A2	2	VT03203U	630	1610	3150	5.1	10.2	1550	2960	9.2	18.4
GCCH 1070.0K_1A2	2	VT03203U	630	1610	3150	5.1	10.2	1550	2960	9.2	18.4
GCCH 1270.0K_1A3	3	VT03203U	630	1610	3150	5.1	15.3	1550	2960	9.2	27.6
GCCH 1470.0K_1A3	3	VT03203U	630	1610	3150	5.1	15.3	1550	2960	9.2	27.6
GCCH 1670.0K_1A4	4	VT03203U	630	1610	3150	5.1	20.4	1550	2960	9.2	36.8
GCCH 1870.0K_1A4	4	VT03203U	630	1610	3150	5.1	20.4	1550	2960	9.2	36.8
Electric Information GCCH (Hot Gas Defrost - 3 FPI)											
GCCH 0680.0H_1A2	2	VT03203U	630	1610	3150	5.1	10.2	1550	2960	9.2	18.4
GCCH 0880.0H_1A2	2	VT03203U	630	1610	3150	5.1	10.2	1550	2960	9.2	18.4
GCCH 1080.0H_1A3	3	VT03203U	630	1610	3150	5.1	15.3	1550	2960	9.2	27.6
GCCH 1280.0H_1A3	3	VT03203U	630	1610	3150	5.1	15.3	1550	2960	9.2	27.6
GCCH 1480.0H_1A3	3	VT03203U	630	1610	3150	5.1	15.3	1550	2960	9.2	27.6
GCCH 1680.0H_1A3	3	VT03203U	630	1610	3150	5.1	15.3	1550	2960	9.2	27.6
GCCH 1880.0H_1A4	4	VT03203U	630	1610	3150	5.1	20.4	1550	2960	9.2	36.8
GCCH 2080.0H_1A4	4	VT03203U	630	1610	3150	5.1	20.4	1550	2960	9.2	36.8

Electrical diagram





Typical diagram of single-phase power for electrical resistors

Power Supply

Suggested connection for power circuit



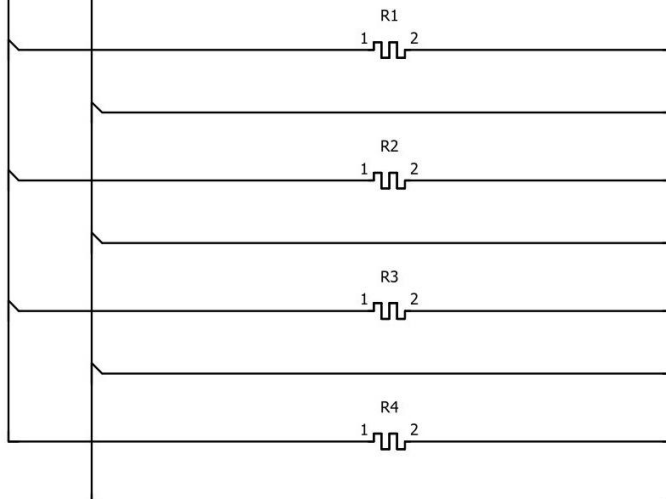
_____ Factory Wiring
 - - - - - Field Wiring (control)
 — — — — — Power Wiring

OR = Thermomagnetic switch (Provide by others)

M = Contactor (Provide by others)

⊕ = Grounding connection required

X2 = Terminal board

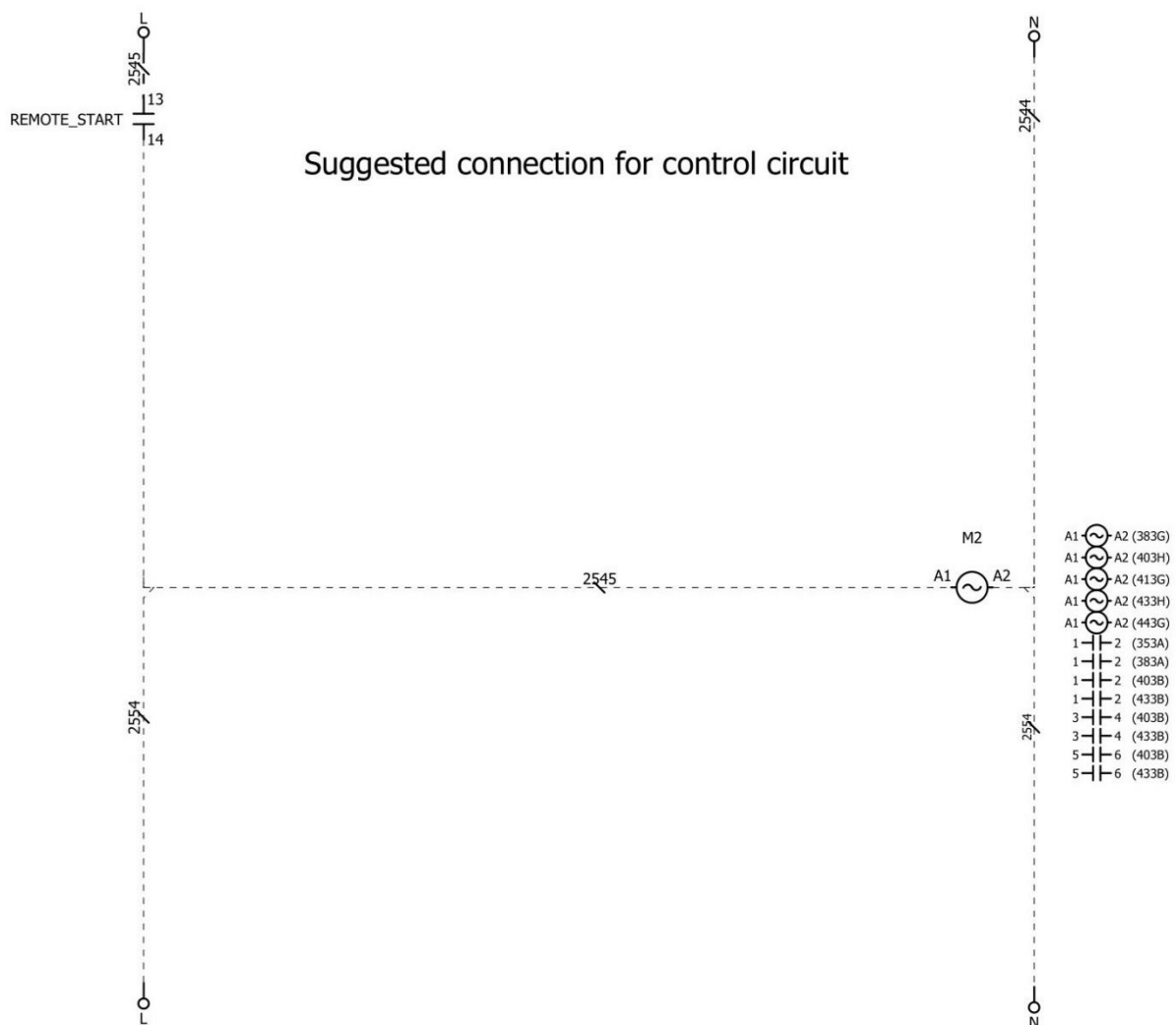


Electrical resistors

Drawing #: GENERIC_WIRING_DIAGRAM

Rev.	Description	Name
00	Created	

Typical diagram of single-phase power for electrical resistors (Continued)

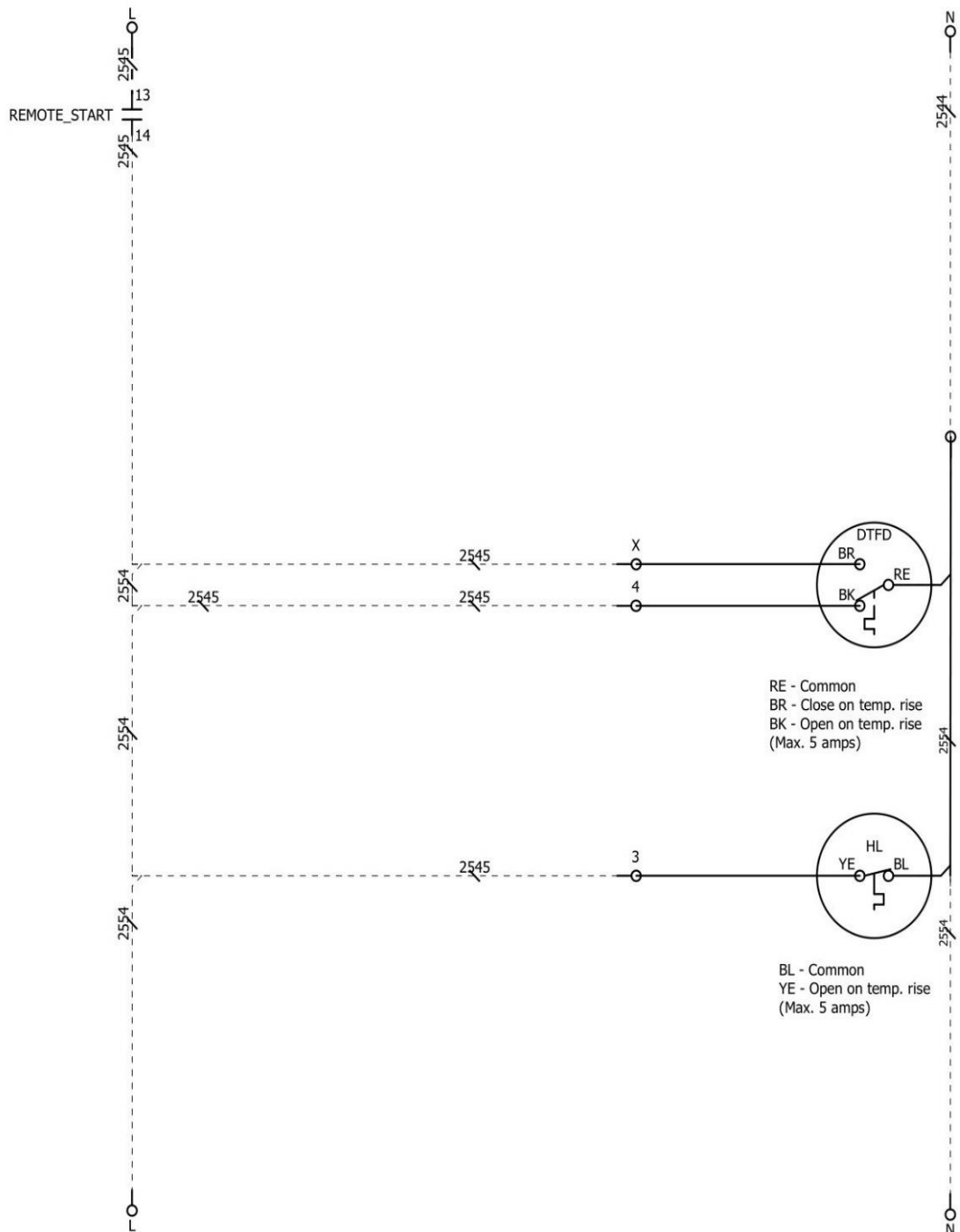


_____ Factory Wiring
 - - - - - Field Wiring (control)
 _____ Power Wiring

OR = Thermomagnetic switch (Provide by others)
M = Contactor (Provide by others)
 = Grounding connection required

[illegible]

Suggested connection for Thermostats



_____ Factory Wiring
 - - - - - Field Wiring (control)
 _____ Power Wiring

M.1 = Contactor per fan (Provide by others)
M.2 = Contactor per electrical heating circuit (Provide by others)
C1 = Other electric devices provided by tohers (e.g.. electronic valve, compressor relay)
HL = Heat Limit
DTFD =Defrost termination fan delay

Defrost cycle max time: 10 to 20 minutes.

15. Spare parts

Model	SPM Fan		Connection box		DTF		HL		Defrost sheet	Drain sheet
	No. V.T.									
	460V-3Ph	230V-3Ph	460V-3Ph-60Hz	230V-3Ph-60Hz	460V-3Ph-60Hz	230V-3Ph-60Hz	460V-3Ph-60Hz	230V-3Ph-60Hz		
GCCH 1000.0A_0A2	VT03204U	VT03204U	57809	57809	N/A	N/A	N/A	N/A	AY010.353G + 2x AY010.379G	AY010.364G
GCCH 1200.0A_0A3	VT03204U	VT03204U	57808	57808	N/A	N/A	N/A	N/A	(AY010.360G+AY010.358G) + 2x AY010.379G	AY010.362G
GCCH 1400.0A_0A3	VT03204U	VT03204U	57808	57808	N/A	N/A	N/A	N/A	(AY010.360G+AY010.358G) + 2x AY010.379G	AY010.362G
GCCH 1600.0A_0A3	VT03204U	VT03204U	57808	57808	N/A	N/A	N/A	N/A	(AY010.360G+AY010.358G) + 2x AY010.379G	AY010.362G
GCCH 1800.0A_0A3	VT03204U	VT03204U	57808	57808	N/A	N/A	N/A	N/A	(AY010.360G+AY010.358G) + 2x AY010.379G	AY010.362G
GCCH 2000.0A_0A4	VT03204U	VT03204U	57808	57808	N/A	N/A	N/A	N/A	(AY010.357G+AY010.358G) + 2x AY010.379G	AY010.363G
GCCH 2200.0A_0A4	VT03204U	VT03204U	57808	57808	N/A	N/A	N/A	N/A	(AY010.357G+AY010.358G) + 2x AY010.379G	AY010.363G
GCCH 2500.0A_0A4	VT03204U	VT03204U	57808	57808	N/A	N/A	N/A	N/A	(AY010.357G+AY010.358G) + 2x AY010.379G	AY010.363G
GCCH 2800.0A_0A4	VT03204U	VT03204U	57808	57808	N/A	N/A	N/A	N/A	(AY010.357G+AY010.358G) + 2x AY010.379G	AY010.363G

Model	SPM Fan		Connection box		DTF		HL		Defrost sheet	Drain sheet
	No. V. T.									
	460V-3Ph	230V-3Ph	460V-3Ph-60Hz	230V-3Ph-60Hz	460V-3Ph-60Hz	230V-3Ph-60Hz	460V-3Ph-60Hz	230V-3Ph-60Hz		
GCCH 1010.0E_7A2	VT03204U	VT03204U	57807, 57809	57806, 57809	4503.1	4503.1	4501.1	4501.1	AY010.353G + 1 x AY010.379G	AY010.364G
GCCH 1210.0E_7A2	VT03204U	VT03204U	57807, 57809	57806, 57809	4503.1	4503.1	4501.1	4501.1	AY010.353G + 1 x AY010.379G	AY010.364G
GCCH 1410.0E_7A3	VT03204U	VT03204U	57807, 57808	57806, 57808	4503.1	4503.1	4501.1	4501.1	(AY010.360G+AY010.358G) + 1x AY010.379G	AY010.362G
GCCH 1610.0E_7A3	VT03204U	VT03204U	57807, 57808	57806, 57808	4503.1	4503.1	4501.1	4501.1	(AY010.360G+AY010.358G) + 1x AY010.379G	AY010.362G
GCCH 1810.0E_7A4	VT03204U	VT03204U	57806, 57808	57806, 57808, 57753	4503.1	4503.1	4501.1	4501.1	(AY010.357G+AY010.358G) + 1x AY010.379G	AY010.363G
GCCH 2010.0E_7A4	VT03204U	VT03204U	57806, 57808	57806, 57808, 57753	4503.1	4503.1	4501.1	4501.1	(AY010.357G+AY010.358G) + 1x AY010.379G	AY010.363G
GCCH 1010.0E_7A2	VT03204U	VT03204U	57807, 57809	57806, 57809	4503.1	4503.1	4501.1	4501.1	AY010.353G + 1 x AY010.379G	AY010.364G
GCCH 0820.0D_7A3	VT03204U	VT03204U	57807, 57808	57806, 57808	4503.1	4503.1	4501.1	4501.1	(AY010.360G+AY010.358G) + 1x AY010.379G	AY010.362G
GCCH 1020.0D_7A3	VT03204U	VT03204U	57807, 57808	57806, 57808	4503.1	4503.1	4501.1	4501.1	(AY010.360G+AY010.358G) + 1x AY010.379G	AY010.362G
GCCH 1320.0D_7A4	VT03204U	VT03204U	57807, 57808	57806, 57808	4503.1	4503.1	4501.1	4501.1	(AY010.357G+AY010.358G) + 1x AY010.379G	AY010.363G
GCCH 1520.0D_7A4	VT03204U	VT03204U	57806, 57808	57806, 57808, 57753	4503.1	4503.1	4501.1	4501.1	(AY010.357G+AY010.358G) + 1x AY010.379G	AY010.363G
GCCH 1720.0D_7A4	VT03204U	VT03204U	57806, 57808	57806, 57808, 57753	4503.1	4503.1	4501.1	4501.1	(AY010.357G+AY010.358G) + 1x AY010.379G	AY010.363G
GCCH 1920.0D_7A4	VT03204U	VT03204U	57806, 57808	57806, 57808, 57753	4503.1	4503.1	4501.1	4501.1	(AY010.357G+AY010.358G) + 1x AY010.379G	AY010.363G
GCCH 0930.0D_7A2	VT03203U	VT03203U	57807, 57809	57807, 57809	4503.1	4503.1	4501.1	4501.1	AY010.353G + 1 x AY010.379G	AY010.364G
GCCH 1030.0D_7A2	VT03203U	VT03203U	57807, 57809	57806, 57809	4503.1	4503.1	4501.1	4501.1	AY010.353G + 1 x AY010.379G	AY010.364G
GCCH 1230.0D_7A3	VT03203U	VT03203U	57807, 57808	57806, 57808	4503.1	4503.1	4501.1	4501.1	(AY010.360G+AY010.358G) + 1x AY010.379G	AY010.362G
GCCH 1430.0D_7A3	VT03203U	VT03203U	57807, 57808	57806, 57808	4503.1	4503.1	4501.1	4501.1	(AY010.360G+AY010.358G) + 1x AY010.379G	AY010.362G
GCCH 1630.0D_7A4	VT03203U	VT03203U	57806, 57808	57806, 57808, 57753	4503.1	4503.1	4501.1	4501.1	(AY010.357G+AY010.358G) + 1x AY010.379G	AY010.363G
GCCH 1830.0D_7A4	VT03203U	VT03203U	57806, 57808	57806, 57808, 57753	4503.1	4503.1	4501.1	4501.1	(AY010.357G+AY010.358G) + 1x AY010.379G	AY010.363G
GCCH 0640.0F_7A2	VT03203U	VT03203U	57807, 57809	57807, 57809	4503.1	4503.1	4501.1	4501.1	AY010.353G + 1 x AY010.379G	AY010.364G
GCCH 0840.0F_7A2	VT03203U	VT03203U	57807, 57809	57807, 57809	4503.1	4503.1	4501.1	4501.1	AY010.353G + 1 x AY010.379G	AY010.364G
GCCH 1040.0F_7A3	VT03203U	VT03203U	57807, 57808	57806, 57808	4503.1	4503.1	4501.1	4501.1	(AY010.360G+AY010.358G) + 1x AY010.379G	AY010.362G
GCCH 1240.0F_7A3	VT03203U	VT03203U	57807, 57808	57806, 57808	4503.1	4503.1	4501.1	4501.1	(AY010.360G+AY010.358G) + 1x AY010.379G	AY010.362G
GCCH 1440.0F_7A3	VT03203U	VT03203U	57807, 57808	57806, 57808	4503.1	4503.1	4501.1	4501.1	(AY010.360G+AY010.358G) + 1x AY010.379G	AY010.362G
GCCH 1640.0F_7A3	VT03203U	VT03203U	57807, 57808	57806, 57808	4503.1	4503.1	4501.1	4501.1	(AY010.360G+AY010.358G) + 1x AY010.379G	AY010.362G
GCCH 1840.0F_7A4	VT03203U	VT03203U	57806, 57808	57806, 57808, 57753	4503.1	4503.1	4501.1	4501.1	(AY010.357G+AY010.358G) + 1x AY010.379G	AY010.363G
GCCH 2040.0F_7A4	VT03203U	VT03203U	57806, 57808	57806, 57808, 57753	4503.1	4503.1	4501.1	4501.1	(AY010.357G+AY010.358G) + 1x AY010.379G	AY010.363G

Model	SPM Fan		Connection box		DTF		HL		Defrost sheet	Drain sheet
	No. V. T.									
	460V-3Ph	230V-3Ph	460V-3Ph-60Hz	230V-3Ph-60Hz	460V-3Ph-60Hz	230V-3Ph-60Hz	460V-3Ph-60Hz	230V-3Ph-60Hz		
GCCH 1050.0G_1A2	VT03204U	VT03204U	57809	57809	N/A	N/A	N/A	N/A	AY010.353G	AY010.364G
GCCH 1250.0G_1A2	VT03204U	VT03204U	57809	57809	N/A	N/A	N/A	N/A	AY010.353G	AY010.364G
GCCH 1450.0G_1A3	VT03204U	VT03204U	57808	57808	N/A	N/A	N/A	N/A	(AY010.360G+AY010.358G)	AY010.362G
GCCH 1650.0G_1A3	VT03204U	VT03204U	57808	57808	N/A	N/A	N/A	N/A	(AY010.360G+AY010.358G)	AY010.362G
GCCH 1850.0G_1A4	VT03204U	VT03204U	57808	57808	N/A	N/A	N/A	N/A	(AY010.357G+AY010.358G)	AY010.363G
GCCH 2050.0G_1A4	VT03204U	VT03204U	57808	57808	N/A	N/A	N/A	N/A	(AY010.357G+AY010.358G)	AY010.363G
GCCH 0860.0K_1A3	VT03204U	VT03204U	57808	57808	N/A	N/A	N/A	N/A	(AY010.360G+AY010.358G)	AY010.362G
GCCH 1060.0K_1A3	VT03204U	VT03204U	57808	57808	N/A	N/A	N/A	N/A	(AY010.360G+AY010.358G)	AY010.362G
GCCH 1360.0K_1A4	VT03204U	VT03204U	57808	57808	N/A	N/A	N/A	N/A	(AY010.357G+AY010.358G)	AY010.363G
GCCH 1560.0K_1A4	VT03204U	VT03204U	57808	57808	N/A	N/A	N/A	N/A	(AY010.357G+AY010.358G)	AY010.363G
GCCH 1760.0K_1A4	VT03204U	VT03204U	57808	57808	N/A	N/A	N/A	N/A	(AY010.357G+AY010.358G)	AY010.363G
GCCH 1960.0K_1A4	VT03204U	VT03204U	57808	57808	N/A	N/A	N/A	N/A	(AY010.357G+AY010.358G)	AY010.363G
GCCH 0970.0K_1A2	VT03203U	VT03203U	57809	57809	N/A	N/A	N/A	N/A	AY010.353G	AY010.364G
GCCH 1070.0K_1A2	VT03203U	VT03203U	57809	57809	N/A	N/A	N/A	N/A	AY010.353G	AY010.364G
GCCH 1270.0K_1A3	VT03203U	VT03203U	57808	57808	N/A	N/A	N/A	N/A	(AY010.360G+AY010.358G)	AY010.362G
GCCH 1470.0K_1A3	VT03203U	VT03203U	57808	57808	N/A	N/A	N/A	N/A	(AY010.360G+AY010.358G)	AY010.362G
GCCH 1670.0K_1A4	VT03203U	VT03203U	57808	57808	N/A	N/A	N/A	N/A	(AY010.357G+AY010.358G)	AY010.363G
GCCH 1870.0K_1A4	VT03203U	VT03203U	57808	57808	N/A	N/A	N/A	N/A	(AY010.357G+AY010.358G)	AY010.363G
GCCH 0680.0H_1A2	VT03203U	VT03203U	57809	57809	N/A	N/A	N/A	N/A	AY010.353G	AY010.364G
GCCH 0880.0H_1A2	VT03203U	VT03203U	57809	57809	N/A	N/A	N/A	N/A	AY010.353G	AY010.364G
GCCH 1080.0H_1A3	VT03203U	VT03203U	57808	57808	N/A	N/A	N/A	N/A	(AY010.360G+AY010.358G)	AY010.362G
GCCH 1280.0H_1A3	VT03203U	VT03203U	57808	57808	N/A	N/A	N/A	N/A	(AY010.360G+AY010.358G)	AY010.362G
GCCH 1480.0H_1A3	VT03203U	VT03203U	57808	57808	N/A	N/A	N/A	N/A	(AY010.360G+AY010.358G)	AY010.362G
GCCH 1680.0H_1A3	VT03203U	VT03203U	57808	57808	N/A	N/A	N/A	N/A	(AY010.360G+AY010.358G)	AY010.362G
GCCH 1880.0H_1A4	VT03203U	VT03203U	57808	57808	N/A	N/A	N/A	N/A	(AY010.357G+AY010.358G)	AY010.363G
GCCH 2080.0H_1A4	VT03203U	VT03203U	57808	57808	N/A	N/A	N/A	N/A	(AY010.357G+AY010.358G)	AY010.363G

Model	Coil heaters	Pan heaters
	230V-3Ph -60Hz	
GCCH 1010.0E_7A2	U20GD26601100230	U20GD26601100230
GCCH 1210.0E_7A2	U20GD26601100230	U20GD26601100230
GCCH 1410.0E_7A3	U20GD38601500230	U20GD38601500230
GCCH 1610.0E_7A3	U20GD38601500230	U20GD38601500230
GCCH 1810.0E_7A4	U20GD50602000230	U20GD50602000230
GCCH 2010.0E_7A4	U20GD50602000230	U20GD50602000230
GCCH 0820.0D_7A3	U20GD38601200230	U20GD38601500230
GCCH 1020.0D_7A3	U20GD38601200230	U20GD38601500230
GCCH 1320.0D_7A4	U20GD50601700230	U20GD50602000230
GCCH 1520.0D_7A4	U20GD50601700230	U20GD50602000230
GCCH 1720.0D_7A4	U20GD50601700230	U20GD50602000230
GCCH 1920.0D_7A4	U20GD50601700230	U20GD50602000230

Model	Coil heaters	Pan heaters
	230V-3Ph -60Hz	
GCCH 0930.0D_7A2	U20GD26601100230	U20GD26601100230
GCCH 1030.0D_7A2	U20GD26601100230	U20GD26601100230
GCCH 1230.0D_7A3	U20GD38601500230	U20GD38601500230
GCCH 1430.0D_7A3	U20GD38601500230	U20GD38601500230
GCCH 1630.0D_7A4	U20GD50602000230	U20GD50602000230
GCCH 1830.0D_7A4	U20GD50602000230	U20GD50602000230
GCCH 0640.0F_7A2	U20GD26600900230	U20GD26601100230
GCCH 0840.0F_7A2	U20GD26600900230	U20GD26601100230
GCCH 1040.0F_7A3	U20GD38601200230	U20GD38601500230
GCCH 1240.0F_7A3	U20GD38601200230	U20GD38601500230
GCCH 1440.0F_7A3	U20GD38601200230	U20GD38601500230
GCCH 1640.0F_7A3	U20GD38601200230	U20GD38601500230
GCCH 1840.0F_7A4	U20GD50601700230	U20GD50602000230
GCCH 2040.0F_7A4	U20GD50601700230	U20GD50602000230

16. Troubleshooting

Symptom	Possible causes	Possible corrective actions
1. Fan does not work.	1.1 Main switch open.	1.1.1 Close switch.
	1.2 Fuses blown.	1.2.1 Check for short circuit or overloads. Replace damaged fuses.
	1.3 Damaged timer or thermostat.	1.3.1 Replace controller.
	1.4 Unit is in defrost cycle.	1.4.1 Wait for end of a cycle.
	1.5 Coil does not cool down enough to reset thermostat.	1.5.1 Increase fan waiting time after defrost cycle.
	1.6 Motor is burnt.	1.6.1 Verify there is no over-voltage and replace motor.
	1.7 Fan does not start.	1.7.1 Check for obstructions (ice, waste, etc.) and remove them. 1.7.2 Check for short circuits exist in fan junction box and repair.
2. Room temperature is too high.	2.1 Room thermostat setting is too high.	2.1.1 Lower thermostat setting.
	2.2 Overheating is too high.	2.2.1 Verify whether expansion valve is feeding properly and clean strainer mesh. 2.2.2 Verify that bulb is located at right position and adjust if necessary. 2.2.3 Adjust overheating at expansion valve. 2.2.4 Verify that refrigerant charge is not too low.
	2.3 Low refrigerant in the system.	2.3.1 Check for leaks and charge system with additional refrigerant.
	2.4 Ice formation on coil.	2.4.1 Perform manual defrost of coil. Check defrost system.
	2.5 Cooling unit is too close to a door.	2.5.1 Relocate unit or add strip/air curtains on door.
	2.6 Excess air infiltration due to open doors.	2.6.1 Check doors seals and replace if necessary.
	2.7 Product has just been added to cold room.	2.7.1 Wait for product temperature to come down.
	2.8 The system is off.	2.8.1 Turn on the refrigeration system.
	2.9 Power surge in system fails.	2.9.1 Restore power surge.
	2.10 Air flow in room is difficult.	2.10.1 Verify that all fans spinning in the right direction. 2.10.2 See possible cause 1.7 2.10.3 See symptom 4. 2.10.4 Go over unit location recommendations.
	2.11 Pressure drop across evaporator is too high.	2.11.1 Replace expansion valve with valve, maintain external pressure equalization, adjust superheat on valve.

Symptom	Possible causes	Possible corrective actions
2. Room temperature is too high.	2.12 Lack of subcooling in the system	2.12.1 Establish subcooling in the system.
	2.13 Pressure drop in the valve is higher than valve's design pressure.	2.13.1 Select a new valve with the desired pressure drop.
	2.14 The expansion valve becomes blocked with ice due to moisture in the system.	2.14.1 Change the dryer filter and clean the ice from the valve.
	2.15 Expansion valve is blocked with wax or other impurities.	2.15.1 Clean valve port and strainer. 2.15.2 Clean solenoid valve and its filter. 2.15.3 Replace the oil in the refrigeration system.
	2.16 The expansion valve is too small.	2.16.1 Select and replace the valve one of greater capacity or port.
	2.17 Expansion valve bulb charge was lost.	2.17.1 Replace the valve (or the powerhead if possible).
	2.18 Wrong selection of expansion valve powerhead.	2.18.1 Select powerhead according to application.
	2.19 Expansion valve bulb does not make good contact with suction line.	2.19.1 Fasten bulb to suction line adequately.
	2.20 Expansion valve bulb is not insulated.	2.20.1 Place insulation all over the bulb.
	2.21 Expansion valve bulb is too close to large valves, flanges, headers or riser pipe.	2.21.1 Replace expansion valve with a valve with external pressure equalization, adjust superheat at valve.
3. Ice buildup in ceiling around evaporator and / or in orifices or fan nozzles, blades or grid.	3.1 Defrost cycle is too long.	3.1.1 Shorten defrost cycle.
	3.2 Fan delay does not work after defrost cycle.	3.2.1 Adjust defrost thermostat properly, or see 3.3.
	3.3 Defective defrost thermostat or timer.	3.3.1 Replace defective component.
	3.4 Too many defrost cycles.	3.4.1 Reduce the number of defrost cycles per day.
4. Coil is not cleared of ice after the defrost cycle.	4.1 Heater does not work.	4.1.1 Make sure all heaters are working.
	4.2 Hot gas supply is not enough.	4.2.1 Make sure there is enough volume of hot gas to defrost the unit.
	4.3 There are not enough defrost cycles per day.	4.3.1 Increase the number of defrost cycles per day.
	4.4 Defrost cycle is too short.	4.4.1 Increase time in the defrost thermostat or timer for longer cycle.
	4.5 Defrost thermostat or timer does not work.	4.5.1 Replace the component.
5. Uneven coil freezing during refrigeration cycle.	5.1 Distributor is in horizontal position.	5.1.1 Change distributor to vertical position.
	5.2 Distributor or capillaries are blocked.	5.2.1 Replace distributor with capillaries.
	5.3 After defrost, dripping time is too short.	5.3.1 Increase dripping time.
	5.4 Incorrect or missing distributor nozzle.	5.4.1 Add or substitute the nozzle with an adequately sized orifice for conditions.
	5.5 Located too close to a door opening.	5.5.1 Relocate the evaporator.

Symptom	Possible causes	Possible corrective actions
6. Ice buildup in drain pan.	6.1 Drain line heater does not work.	6.1.1 Check heater power supply. 6.1.2 Change drain line heater.
	6.2 Tray heater does not work.	6.2.1 Check heater power supply. 6.2.2 Change tray heater.
	6.3 Unit is improperly tilted.	6.3.1 Level unit to horizontal position.
	6.4 Drain line is clogged.	6.4.1 Clean drain line. 6.4.2 Insulate drain line properly (if clogged with ice).
	6.5 Thermostat is not working.	6.5.1 Replace defective component.
	6.6 Drain line has no water trap.	6.6.1 Install a water trap in the drain line outside the cold room.
	6.7 Drain pan was not correctly replaced on unit after maintenance.	6.7.1 Verify that drain pan is close to heaters or to the hot gas coil.
7. Water buildup in drain pan or water distributed outside unit.	7.1 The drain line clogged.	7.1.1 Clean drain line.
	7.2 Drain pan was not correctly replaced on unit after maintenance.	7.2.1 Make sure the drainage pan is levelled backwards.
	7.3 The unit is improperly tilted.	7.3.1 Level unit back to horizontal position.



17. Reference information

Service log

GCCH..A – GCCH..E – GCCH..D – GCCH..G – GCCH..F – GCCH..K – GCCH..H

One data sheet must be completed for each installation and each cooler, with a copy for the owner, a copy for the installer and the original for Güntner. If another company is to provide the service and maintenance, additional copies should be prepared as necessary.

Güntner

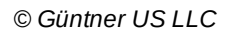
System reference data

The refrigeration installation contractor must complete and sign the information below:

Date of installation of system _____
Installer name and address _____

Evaporator(s)

Evaporator Model No. _____
Evaporator Serial Number _____
Electrical System _____ Volts _____ Phases _____
Expansion valve brand and model _____
Environment at startup _____ °F
Box design temperature _____ °F
Box operating temperature _____ °F
Thermostat setting _____ °F
Defrost setting ____ / day _____ minutes fail proof ____ / day _____ minutes fail proof.
Evaporator suction line temperature _____ °F
Superheat at evaporator _____ °F
Discharge _____ No. of times _____ Final Microns _____ No. of times _____ Final Microns _____
Evaporator drain line with trap external to box Yes ☐ No ☐



This image shows a single page of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page, typical of notebook or legal stationery. There are no margins, text, or other markings on the page.