

MicroTech™ III Base Controller			
Jumper	Description	Options	
JP1	Mode	Open for normal operation mode	
		Shorted for service/test operation mode	
<p>JP1 Jumper Location on MicroTech III Base Controller.</p>			
JP2	Fan operation only applies to room sensor control without a fan mode On/Auto switch	Open for continuous fan operation	
		Shorted for cycling fan operation	
JP3	Freeze Protection	Open for water freeze protection (Standard range units)	
		Shorted for antifreeze protection (Geothermal range units)	
JP4	Freeze Fault Protection	Open for none	
		Shorted to enable freeze fault protection based on Leaving Water Temperature (LWT)	
JP5	Set point adjustment range only applies to network controls with a room temperature sensor	Open for adjustment range of -5.0° to +5.0°F	
		Shorted for 55° to 95°F adjustment range	
JP6	Room control type	Open for thermostatic room control	
		Shorted for room temperature sensor control, MicroTech III only.	
JP7	Compressor heating source	Open to enable compressor heating	
		Shorted to disable compressor heating	
JP8	I/O expansion module	Open when I/O expansion module is not needed	
		Shorted when I/O expansion module is required	
I/O Expansion Module			
JP1	Not Used	Open	
JP2			
JP3	Secondary Heating Options	Open	None
JP4			
JP3		Shorted	Supplemental Electric Heat
JP4			
JP3	Open	Boilerless Electric Heat	
JP4			
JP5	Hot Gas Reheat / Desuperheater Waterside Economizer	Open	None
JP6			
JP5		Shorted	Hot Gas Reheat (HGR) or Desuperheater
JP6			
JP5	Open	Waterside Economizer	
JP6			
JP7	Not Used	Open when I/O expansion module is not needed	
JP8	Single stage compressor	Open	
	Two stage compressor	Shorted	
<p>Note: See "MicroTech III Base Controller with I/O Expansion Module Terminal Details" on page 4 fold-out.</p>			

Before and during installation – verify:

- Supply voltage, fuse and wire size match unit rating plate.
- All 460V units require a 4 wire wye connection providing a neutral for operation of fan motor. Neutral connection to be made to brown wire located in the control panel.
- Low voltage wiring is connected correctly and is free of shorts.
- Room thermostat, if used, is configured for conventional wiring, or that fan is not called on a call for heat or cool.
- Remove compressor shipping sleeves (recommended).
- Select correct transformer voltage tap for supply voltage. 208/230V units are shipped connected for 208V supply. See unit schematic for details.
- Condensate trap is installed when required. (WGS and WGT models require a field provided external condensate trap.)
- Configure jumpers as required for unit application. **Remove main power from unit to configure jumpers.** Once jumpers are configured the unit electrical supply must remain off for 10 seconds.
- All shipping blocks are removed. (Blower assembly, hot gas reheat valve, etc.).
- Inspect unit for rubbing refrigeration piping and wiring. Adjust as needed.
- Check electrical connections are secure and in place.
- E and U terminals, if used, are connected to common by means of a dry contact.

Initial start-up:

Note: The use of this form does not replace Check, Test and Start form provided

- Verify current conditions are within the unit operating range (see tables on page 4 fold-out). Supplemental heat source may be required for start-up.
- The compressor operation should be verified on all 3 phase units. Incorrect rotation can be identified by loud compressor operation and no differential pressure between low side and high side service ports. **NOTICE:** The fan rotation will be correct and does not indicate compressor rotation.
- Complete provided start up form and verify against catalog data. The fluid temperature difference in cooling operation should be between 10 to 14°F and 6 to 8°F in heating.
- Confirm loop piping has been flushed or debris prior to directing fluid through coil.
- Room sensor and return air sensor are not connected at the same time.
- Connecting both sensors may indicate a sensor failure or inaccurate space temperature.
- Terminal Connection H8 harness is supplied as part of the valve package. Harness p/n: 910107989 is required.
- Check fan speed setting is correct for application (factory set on setting 3).
- Check unit supply voltage across all legs and to neutral when applicable.

SUG WS-GS-GT001

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Start-Up Guide

SUG WS-GS-GT001

Group: WSH
Part Number: 910155026
Date: June 2014

WGS, WGTH, WGSV, and WGT Water Source Heat Pump Units

This guide is provided as a brief overview. Refer to unit specific installation manual for safety and complete installation information.

WARNING

The installer must determine and follow all applicable codes and regulations. This equipment presents hazards of electricity, rotating parts, sharp edges, heat and weight. Failure to read and follow these instructions can result in property damage, severe personal injury or death. This equipment must be installed by experienced, trained personnel only.

Please leave this document with the unit.



Air Limits

Air Limits	Standard Range Units		Geothermal Range Units	
	Cooling	Heating	Cooling	Heating
Min. Ambient Air	50°F (10°C)	50°F (10°C)	40°F (4°C)	40°F (4°C)
Max. Ambient Air	100°F (38°C)	85°F (29°C)	100°F (38°C)	85°F (29°C)
Min. Entering Air	50°F (10°C)	50°F (10°C)	50°F (10°C)	40°F (4°C)
Max. Entering Air	100/83°F (38/28°C)	80°F (27°C)	100/83°F (38/28°C)	80°F (27°C)

Water limits

Water Limits	Standard Range Units		Geothermal Range Units	
	Cooling	Heating	Cooling	Heating
Min. Entering Water	55°F (13°C)	55°F (13°C)	30°F (-1°C)	20°F (-6°C)
Normal Entering Water	85°F (29°C)	70°F (21°C)	77°F (25°C)	40°F (4°C)
Max. Entering Water	110°F (43°C)	90°F (32°C)	110°F (43°C)	90°F (32°C)
Min. GPM/Ton	1.5			
Nominal GPM/Ton	3.0			
Max. GPM/Ton	4.0			

Notes:

1. Maximum and minimum values may not be combined. If one value is at maximum or minimum, the other two conditions may not exceed the normal condition for standard units. Extended range units may combine any two maximum conditions, but not more than two, with all other conditions being normal conditions.
2. This is not a normal or continuous operating condition. It is assumed that such a start-up is for the purpose of bringing the building space up to occupancy temperature.

Figure 1: MicroTech III Base Controller with I/O Expansion Module Terminal Details

