



# Whirlpool WGFM195 Installation Instructions Manual



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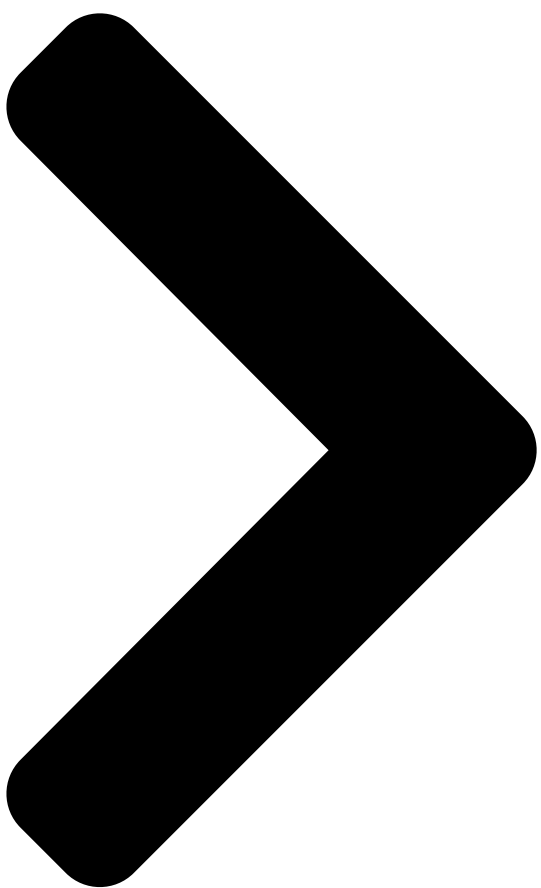
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## Quick Links

[1 Repair and Replacement Parts](#)

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See also: [Instruction and Installation Manual](#)



# **GAS-FIRED WARM AIR FURNACE INSTALLATION INSTRUCTIONS**

## **ATTENTION INSTALLATION PERSONNEL**



As a professional installer, you have an obligation to know the product better than the customer. This includes all

safety precautions and related items. Prior to actual installation, thoroughly familiarize yourself with this instruction

manual. Pay special attention to all safety warnings. Often during installation or repair, it is possible to place

yourself in a position which is more hazardous than when the unit is in operations.

Remember, it is your responsibility to install the product safely and to know it well enough to be able to instruct a

customer in its safe use. Safety is a matter of common sense...a matter of thinking before

acting. Most dealers have  
a list of specific good safety practices...follow them.

The precautions listed in this installation manual are intended as supplemental to existing practices. However, if there is a direct conflict between existing practices and the content of this manual, the precautions listed here take precedence.



**PLACEHOLDER**

**FOR BAR CODE**

**Whirlpool Gold**

®

**Models**

**WGFM195, WFD195**

**WPIO-299H**

**(Type FSP Category IV Direct or Nondirect Vent Air Furnace)**

**Tradewinds Distributing Company, LLC**

**14610 Breakers Drive**

**Jacksonville, Florida 32258**

These furnaces comply with requirements embodied in the American National Standard/National Standard of Canada ANSI Z21.47 CSA-2.3 Gas Fired Central Furnaces.

**NOTE: Please contact your distributor or our website for**  
applicable Specification Sheet referred to in this manual.

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## Related Manuals for Whirlpool WGFM195

### [Furnace Whirlpool Gold WGFM195 Installation Instructions Manual](#)

Gold gas-fired warm air furnace (52 pages)

### [Furnace Whirlpool Gold WGGE45 Installation Instructions Manual](#)

Whirlpool gold models package gas electric furnaces (28 pages)

### [Furnace Whirlpool WFCU Installation Instructions Manual](#)

90+ gas furnace (24 pages)

### [Furnace Whirlpool WFCU Installation Instructions Manual](#)

(28 pages)

### [Furnace Whirlpool WGFM29 Installation Instructions Manual](#)

93% and 95% 2-stage variable-speed gas furnace (52 pages)

### [Furnace Whirlpool WGGE43 Installation Instructions Manual](#)

Package gas electric furnaces (32 pages)

### [Furnace Whirlpool Gold WGFD295 Installation Instructions Manual](#)

80% 2-stage variable speed gas furnace (40 pages)

### [Furnace Whirlpool WGFD293 Installation Instructions Manual](#)

93% and 95% 2-stage variable speed gas furnace (52 pages)

### [Furnace Whirlpool WGFD28 Installation Instructions Manual](#)

80% 2-stage variable speed gas furnace gold models (40 pages)

### [Furnace Whirlpool WFCT Installation Instructions Manual](#)

90+ multipositional gas furnace (32 pages)

### [Furnace Whirlpool WGFBLT Installation Instructions Manual](#)

80% 2-stage variable speed gas furnace (28 pages)

### [Furnace Whirlpool Whirlpool furnace User Instructions](#)

(12 pages)

### [Furnace Whirlpool GAS FURNACE User Instructions](#)

(8 pages)

### [Furnace Whirlpool GAS FURNACE User Instructions](#)

(8 pages)

### [Furnace Whirlpool WFAU Installation Instructions Manual](#)

(20 pages)

### [Furnace Whirlpool WEFV08S-1A Installation Instructions Manual](#)

Variable speed electric furnace (16 pages)

## Summary of Contents for Whirlpool WGFM195

[Page 1](#) Z21.47 CSA-2.3 Gas Fired Central Furnaces. FOR BAR CODE NOTE: Please contact your distributor or our website for applicable Specification Sheet referred to in this manual. Tradewinds Distributing Company, LLC Whirlpool Gold ® Models 14610 Breakers Drive WGFM195, WFD195 Jacksonville, Florida 32258 WPIO-299H...

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### [Page 3: Gas Furnace Safety Precautions](#)

GAS FURNACE SAFETY PRECAUTIONS Please adhere to the following warnings and cautions when installing, adjusting, altering, servicing or operating the furnace. To ensure proper installation and operation, thoroughly read this manual for specifics pertaining to the installation and application of this product. Recognize this symbol as a safety precaution.

### [Page 4: Electrostatic Discharge \(Esd\) Precautions](#)

Use the following steps during furnace installations and servicing WARNING to protect the integrated control module from damage. By putting the furnace, the control and the person at the same electrostatic potential, these steps will help avoid exposing the integrated Should overheating occur or the gas supply fail to shut control module to electrostatic discharge.

### [Page 5: Component Identification](#)

Component Identification Upflow/Horizontal Counterflow/Horizontal CU T FO R DE HU M A. Gas control valve I. Flame sensor Q. Electrical connection inlets (alternate) Y. Integrated control module (with fuse and diagnostic LED) B. Gas line entrance (alternate) J. Flue pipe connection/coupling R.

### [Page 6: Location Requirements And Considerations](#)

Dual certification means that the combustion air inlet pipe is To ensure proper installation and operation, thoroughly read optional, and the furnace can be vented as a: this manual for specifics pertaining to the installation and application of this product. Nondirect vent (single pipe) central forced air furnace in which combustion air is taken from the installation area or from air ducted from the outside or a,...

### [Page 7: Clearances And Accessibility](#)

Check that adequate combustion air is available for the Counterflow Installation Over a Noncombustible Floor furnace. Improper or insufficient combustion air can expose Before setting the furnace over the plenum opening, ensure building occupants to gas combustion products that could that the surface around the opening is smooth and level.

### [Page 8: Existing Furnace Removal](#)

Suspended Furnace 4. Close fireplace dampers. 5. Turn on clothes dryers and any appliance not connected to the venting system. Turn on any exhaust fans, such as range hoods and bathroom exhausts, so they shall operate at maximum speed. Do not operate a summer exhaust fan. 6.

[Page 9](#) The following information on air for combustion and ventilation is Equipment Located in Confined Spaces: All Air from Inside reproduced from the National Fuel Gas Code NFPA 54/ANSI Building. See 5.3.3-a. Z223.1 Section 5.3. NOTE: Each opening must have a free area of not less than 1 sq.

[Page 10](#) 2. When communicating with the outdoors through vertical 4. When ducts are used, they shall be of the same cross- ducts, each opening shall have a minimum free area of sectional area as the free area of the openings to which 1 sq.

### [Page 11: Installation Positions](#)

INSTALLATION POSITIONS This furnace may be installed in an upright position or horizontal NOTE: Do not attach the ductwork to the back of the furnace. on either the left or right side panel. For upflow installations requiring 1,800 CFM or more, use either 2 side returns or a bottom return or a combination of side and NOTE: Do not install this furnace on its back.

### [Page 12: Alternate Electrical And Gas Line Connections](#)

NOTES: Recommended Installation Positions—Horizontal Counterflow—Right Side Panel Discharge The field supplied drain hose is connected from the vent/ drain connection to the condensate drain line with a field supplied connector. Make a small loop in the drain hose to serve as a P-trap. Recommended Installation Positions—Upright Upflow A.

## [Page 13: Propane Gas/High Altitude Installations](#)

PROPANE GAS/HIGH ALTITUDE INSTALLATIONS WARNING Pressure Manifold Switch Altitude Orifice Pressure Change Possible property damage, personal injury or death may occur if the correct conversion kits are not installed. The Natural 0 to None 3.5" W.C. None appropriate kits must be applied to ensure safe and proper 7,000 ft furnace operation.

## [Page 14: Proper Vent/Flue And Combustion Air Piping Practices](#)

Carefully follow  $\frac{1}{2}$ " (1.3 cm) thick closed-cell foam. Also all vent/ Vent terminations (nondirect and direct vent) must terminate flue piping exposed outdoors in excess of the terminations at least 3 ft (91.4 cm) above any forced air inlet located within shown in this manual (or in unheated areas) must be insulated 10 ft (3 m).

## [Page 15: Standard Furnace Connections](#)

Standard Furnace Connections Combustion Air Pipe—Nondirect Vent Installations It is the responsibility of the installer to ensure that the piping A minimum of one 90° elbow should be installed on the connections to the furnace are secure, airtight and adequately combustion air intake coupling to guard against inadvertent supported.

## [Page 16: Alternate Vent/Flue Location](#)

NOTE: Standard and alternate locations can be combined (for Relocate and install the plastic plug in the standard vent/flue example, an installation may use the standard combustion air location (base pan). intake location but use the alternate vent/flue location or vice Plug remaining hole in the blower deck with the plastic plug versa), if needed.

## [Page 17: Nondirect Vent \(Single Pipe\) Piping](#)

Alternate Vent/Flue Location—Counterflow Nondirect Vent (Single Pipe) Maximum Allowable Length of Vent/Flue Pipe—ft (m) Number of Elbows Models Pipe—in. (kBtu\_Tons) (cm) 045\_3 2 or 2½ (5.12 or 6.4) (21) (20) (19) (18) (17) (16) (15) 070\_3 2 or 2½ (5.12 or 6.4) (21) (20) (19)

## [Page 18: Direct Vent \(Dual Pipe\) Piping](#)

Vertical Vent Termination (Single Pipe) Standard Horizontal Vent Termination (Single Pipe)—Above Highest Anticipated Snow Level A. 12" (30.5 cm) minimum from wall B. Vent/flue tee or 90° elbow turned down A. Tee C. 12" (30.5 cm) minimum to roof or highest anticipated snow level B.

## [Page 19: Vent/Flue And Combustion Air Pipe Terminations](#)

Direct Vent (Dual Pipe) Maximum Allowable Length of Vent/Flue and Combustion Air Intake Pipe—ft (m) Number of Elbows Unit Input (Btu) Termination Style Pipe—in. (cm) 045\_3 Standard 2 or 2½ (5.12 or 6.4) 68 (20.7) 65 (19.8) 62 (18.9) 59 (18) 56 (17.1) 53 (16.2) 50 (15.2) Alternate 2 or 2½...

## [Page 20: Vent/Intake Terminations For Installation Of Multiple Direct Vent Furnaces](#)

Standard Horizontal Vent Terminations (Dual Pipe) Alternate Horizontal Terminations (Dual Pipe)—Above Highest Anticipated Snow Level A. 24" (61 cm) maximum, 3" D. 12" (30.5 cm) minimum to roof or (7.6 cm) minimum highest anticipated snow level B. 12" (30.5 cm) minimum from E.

## [Page 21: Side Wall Vent Kit](#)

NOTE: This kit is not intended for use with single pipe (nondirect Side Wall Vent Kit vent) installations. Refer to the directions furnished with the Side Wall Vent Kit (Part This kit is to be used with 2" or 3" (5.1 cm or 7.6 cm) direct vent Number 0170K00000S) for installation specifications.

## [Page 22: Upright Installations-Trap On Left Side](#)

Alternate Vent/Flue Drain Hose Connections Upright Installations—Trap on Left Side NOTE: For left side trap installation, grommets must be moved to Upright installations using the alternate vent/flue outlet will the left side of the furnace and the plugs installed on the right require right side only drain hoses to be connected as follows.

### [Page 23: Upright Drain Trap Mounting-Left Or Right Side Panel](#)

Horizontal Upflow Connections—Right Side Down (Counterflow Similar) Upright Drain Trap Mounting—Left or Right Side Panel 1. Insert the drain tubes into the drain trap and position the drain trap against the side panel. NOTE: Drain tubes must reach the bottom of the drain trap. 2.

### [Page 24: Horizontal Drain Trap Mounting-Left Or Right Side Panel](#)

Horizontal Upflow Connections—Left Side Down (Counterflow Similar) Horizontal Drain Trap Mounting—Left or Right Side Panel 1. Position the drain trap against the side panel with the drain tubes inserted into the trap. NOTE: The trap may be orientated with the outlet facing either the furnace's top cover or base pan.

### [Page 25: Junction Box Relocation](#)

Junction Box Relocation 24-Volt Thermostat Wiring NOTE: Wire routing must not interfere with circulator blower WARNING operation, filter removal or routine maintenance. Low voltage connections can be made through either the right or Edges of sheet metal holes may be sharp. Use gloves as left side panel.

### [Page 26: Gas Supply And Piping](#)

Optional Accessories Wiring All line voltage wire splices must be made inside the furnace junction box. Electronic The integrated control module electronic air cleaner terminals Air Cleaner (EAC) are energized with 115 volts whenever the circulator blower is energized. 24-Volt Humidifier The yellow wire connected to the induced draft blower pressure switch is powered anytime the pressure switch is closed and 120 VAC Hot and...

### [Page 27: Gas Control Valve](#)

To connect the furnace to the building's gas piping, the installer Gas Control Valve must supply a ground joint union, drip leg, manual shutoff valve and line and fittings to connect to the gas control valve. In some This furnace is equipped with a 24-volt gas control valve cases, the installer may also need to supply a transition piece controlled during the furnace operation by the integrated control from ½"...

[Page 28](#) Gas Piping Connections—Upflow Gas Piping Connections—Horizontal Upflow A. Alternate gas line location F. Height required by local codes B. Manifold G. Drip leg A. Gas control valve F. Drain trap C. Gas control valve H. Ground joint pipe union B. Ground joint pipe union G.

### [Page 29: Gas Piping Checks](#)

Direct/Standard Inlet Piping Propane Gas Tanks and Piping WARNING WARNING If the gas furnace is installed in a basement, and Edges of sheet metal holes may be sharp. Use gloves as Placeholder excavated area or a confined space, it is strongly a precaution when removing hole plugs.

[Page 30](#) Sizing Between 1 and 2 Stage Regulator\* Maximum propane capacities listed are based on 2 psig pressure drop at 10 psig setting. Capacities in 1,000 Btu/h. Propane Gas Piping Chart I Tubing Size, O.D. Type L Nominal Pipe Size Schedule 40 Pipe or Tubing Length—ft (m) ¾"...

### [Page 31: Circulating Air And Filters](#)

CIRCULATING AIR AND FILTERS 3. In the corners of the opening, cut the sheet metal along the Ductwork—Airflow scribe lines to free the duct flanges. 4. Using the scribe line along the duct flange as a guide, unfold Duct systems and register sizes must be properly designed the duct flanges around the perimeter of the opening using a for the CFM and external static pressure rating of the furnace.

[Page 32](#) Refer to Minimum Filter Requirement charts to determine filter area requirements. Minimum Filter Requirements Chart Cooling Airflow Requirement (CFM)—Permanent Minimum Filter Area (sq. in.) Based On 600 ft (182.9 m) Per Minute Filter Face Velocity Input Airflow 1,000 1,200 1,400 1,600 2,000 0453BXA...

### [Page 33: Start-Up Procedure And Adjustment](#)

START-UP PROCEDURE AND ADJUSTMENT This furnace must have a 115 VAC power supply

properly After a 100- to 150-second delay period (field-selectable), the connected and grounded. Proper polarity must be maintained for circulator blower de-energizes. correct operation. 2. Remove the burner compartment door and move the furnace In addition to the following start-up and adjustment items, refer gas control valve manual control to the Off position.

### [Page 34: Gas Manifold Pressure Measurement And Adjustment](#)

Gas Control Valve—Honeywell VR9205 2-Stage If the supply pressure differs from chart, make the necessary adjustments to the pressure regulator, gas piping size, etc., and/ or consult with local gas utility. 5. Turn off the gas supply to the furnace at the manual shutoff valve.

### [Page 35: Gas Input Rate Measurement-Natural Gas Only](#)

8. Adjust manifold pressure using the following Manifold Gas Example: Installation's gas heating (HTG) value: 1,000 Btu/ft Pressure chart. (Obtained from gas supplier) 9. Remove the regulator cover screw from the low (LO) outlet Installation's seconds per cubic foot: 34 sec/ft pressure regulator adjust tower.

### [Page 36: Circulator Blower Speeds](#)

3. Relocate the desired motor leads to the circulator blower heat and cool speed terminals on the integrated control module. Circulator Blower Speeds (Terminals are identified as LO HEAT-H, HI HEAT-H and COOL-H (hot)). If a heating speed and the cooling blower WARNING speed are the same, a jumper wire must be used between the heat and cool terminals.

### [Page 37: Cooling Mode](#)

If the furnace is operating in the low-stage heating mode Integrated control module performs safety circuit checks. when thermostat contacts open, circulator blower remains at Circulator blower is energized on low-heat speed. Electronic low-heat speed for the selected delay off period. air cleaner terminals are energized.

### [Page 38: Maintenance](#)

MAINTENANCE To remove filters from an external filter rack in an upright upflow WARNING installation, follow the directions provided with external filter rack kit. HIGH VOLTAGE! Horizontal Unit Filter Removal To avoid personal injury or death due to electrical shock, disconnect electrical power Filters in horizontal installations are located in the central return before performing any maintenance.

### [Page 39: Flue Passages \(Qualified Servicer Only\)](#)

Flue Passages (Qualified Servicer Only) Before Leaving an Installation The heat exchanger flue passageways should be inspected at the Cycle the furnace with the thermostat at least 3 times. Verify beginning of each heating season. If necessary, clean the cooling and fan only operation. passageways as outlined below.

### [Page 40: Diagnostic Chart](#)

Diagnostic Chart WARNING HIGH VOLTAGE! To avoid personal injury or death due to electrical shock, disconnect electrical power before performing any service or maintenance. The red diagnostic LED blinks to assist in troubleshooting the unit. The number of blinks refers to a specific fault code. Symptoms of Abnormal Associated...

[Page 41](#) Symptoms of Abnormal Associated Notes and Operation LED Code Fault Description Possible Causes Corrective Actions Cautions Induced draft 3 flashes Pressure switch Pressure switch hose Inspect pressure Turn off power blocked, pinched or switch hose. Repair/ blower runs circuit is not prior to repair.

### [Page 42: Blower Performance Data](#)

Symptoms of Abnormal Associated Notes and Operation LED Code Fault Description Possible Causes Corrective Actions Cautions Normal furnace 7 flashes Flame sense Flame sensor is coated/ Sand flame sensor if Turn off power prior to repair. operation. microamp signal oxidized. coated/oxidized.

[Page 43](#) Blower Performance Data CFM and Temperature Rise vs. External Static Pressure  
Tons External Static Pressure (Inches Water Column) AC at Model—Heating Motor 0.5" Speed as Shipped Speed Rise CFM Rise CFM Rise CFM Rise CFM Rise CFM CFM CFM WGFM1950704CXA

High 2,069 1,965...

#### [Page 44: Wiring Diagram-Wfd195](#)

3. For most jobs, about 400 CFM per ton when cooling is maximum external static pressure allowed when heating. The desirable. data for 0.6" W.C. to 0.8" W.C. is shown for air conditioning purposes only. 4. Installation is to be adjusted to obtain temperature rise within the range specified on the rating plate.

#### [Page 45: Wiring Diagram-Wgfm195](#)

6. To recall the last 5 faults, most recent to least recent, depress temperature rating of at least 105°C. Use copper conductors switch for more than 2 seconds in standby (no thermostat only. inputs). WIRING DIAGRAM—WGFM195 WARNING HIGH VOLTAGE! Disconnect ALL power before servicing. Multiple power sources may be present.

#### [Page 46: Wiring Diagram-Wgfm195](#)

6. To recall the last 5 faults, most recent to least recent, depress temperature rating of at least 105°C. Use copper conductors switch for more than 2 seconds in standby (no thermostat only. inputs). WIRING DIAGRAM—WGFM195 WARNING HIGH VOLTAGE! Disconnect ALL power before servicing. Multiple power sources may be present.

#### [Page 47: Wiring Diagram-Wfd195](#)

NOTES: 4. If heating and cooling blower speeds are not the same, discard jumper before connecting blower leads. Unused 1. Set heat anticipator on room thermostat at 0.7 amps. blower leads must be placed on "PARK" terminals of 2. Manufacturer's specified replacement parts must be used integrated control or taped.

#### [Page 48: Assistance Or Service](#)

Or call toll free: 1-866-944-7575. Tradewinds Distributing Company, LLC 14610 Breakers Drive Jacksonville, FL 32258 ®Registered Trademark/TM Trademark of Whirlpool, U.S.A., WPIO-299H Manufactured under license by Tradewinds Distributing Company, LLC, Jacksonville, Florida. 5/10 © 2010. All rights reserved.

This manual is also suitable for:

[Wfd195](#)