



SlimFitTM

**Commercial Condensing
Gas-fired water boilers**

Addendum Boiler Manual

KEEP THIS ADDENDUM WITH BOILER MANUAL

**This Addendum adds to and supercedes items in the “SlimFit Boiler Manual”
(Part Number 550-100-116) and previously released Addenda’s.**

SlimFit Boilers (SF1000, SF1500, and SF2000) can now be vented in a Category II configuration.

In addition to the SlimFit boilers Category IV rating (positive pressure, likely to condense), SlimFit boilers are approved for Category II (negative pressure, likely to condense) as well.

This new venting option includes / requires:

- The Vent system for a Category II SlimFit boiler is considered a Designed / Engineered vent system and should be designed by a professional using accepted engineering practices in accordance to local authority having jurisdiction.
- Vertical Vent only.
- Must not be installed into an existing common vent system with other appliances.
- Combustion air from the boiler room. See Direct Exhaust – Combustion Air opening requirements in SlimFit Boiler Manual.
- Must use SlimFit Vent/Air adapter 10” diameter for Category II Vent Connection, see page 2 in this addendum for approved adapters.
- The vent shall consist of a 3 foot piece of 10” diameter straight pipe directly after the SlimFit Vent/Air adapter before any diameter or direction changes in the vent.
- The Vent System should be designed so that the pressure in the vertical vent pipe immediately following the boiler is between the ranges provided in the Table 1, page 2, during all operating conditions i.e., High Fire, Low Fire, etc.
- Flue gas temperature should not exceed 216°F, the boiler will shut down and recycle if it does. The flue gas temperature should typically be within 20°F of the return water temperature of the boiler. If there is the potential for a wide variation in return water temperatures, the lowest possible temperature should be used for any calculations.

- continued on next page

Hazard definitions

The following defined terms are used throughout these Instructions to bring attention to the presence of hazards of various risk levels or to important information concerning the life of the product.



WARNING Indicates presence of hazards that can cause severe personal injury, death or substantial property damage.



NOTICE Indicates special instructions on installation, operation or maintenance that are important but not related to personal injury or property damage.



- continued

- Stack / Vent Flow Rate for each individual boiler model is listed in the table below. This flow rate is based on the unit running at 9.25% CO₂ and the maximum flue gas temperature of 216°F. The values can vary depending on the location of the installation and operating conditions.
- A carbon monoxide detector(s) is required in the boiler room for SlimFit boilers installed in a Category II configuration. The carbon monoxide detector must be wired on the same electrical circuit as the boiler. Check your local codes for any additional requirements of carbon monoxide detectors.

TABLE 1 Rating & Vent Data

| Boiler Model | Input Btuh | Stack / Vent flow rate scfm | Negative Pressure to be maintained at Vent Connection of the boiler Inches w.c. | SlimFit Vent Adapter required for Category II |
|--------------|------------|-----------------------------|---|---|
| SF1000 | 1,000,000 | 279 | -0.001 to -0.100 | 10" |
| SF1500 | 1,500,000 | 418 | -0.001 to -0.100 | 10" |
| SF2000 | 2,000,000 | 558 | -0.001 to -0.100 | 10" |

WARNING

Improper Installation of a Category II vent system resulting in positive pressure in the vent system can result in flue gas spillage and carbon monoxide emissions, causing severe personal injury or death.

NOTICE

Weil-McLain recommends the use of a Variable Speed Chimney Fan / Power venter to ensure that the appropriate negative pressure range is kept for Category II venting. The reason this may be needed is due to the higher efficiency of the SlimFit boiler, the exhaust gas temperatures are lower which result in less draft when using a chimney fan/power venter, a flow proving switch should be wired into the LCI circuit on the boiler. See the boiler manual for additional information. The use of this device should be considered in any Engineered Vent system in accordance to local authority having jurisdiction.

NOTICE

Weil-McLain recommends the use of a Double Acting Barometric Damper or Modulating Damper to ensure the appropriate negative pressure range is kept for Category II venting. The use of this device should be considered in any Engineered Vent system in accordance to local authority having jurisdiction.

NOTICE

When using a damper of any kind, it is recommended to use a thermal spill switch to detect any exhaust flow into the boiler room. Verify the temperature range on the thermal spill switch is adequate for the Flue gas temperature from the SlimFit boiler. The use and set-point of this shall be determined by the system designer in accordance to local authority having jurisdiction.

Code Compliance

WARNING

Venting / Combustion air piping – Installations must provide provisions for combustion and ventilation air in accordance with the section “Venting of Equipment”, of the National Fuel Gas Code, ANSI Z223.1 / NFPA 54, or “Venting Systems and Air Supply for appliances” of the Natural Gas and Propane Installation Code, CAN/CSA B149.1, or applicable provisions of the local building codes.

Required 10" SlimFit vent adapter supplier list for Category II venting of a Slimfit boiler.

| Vent Manufacturer | Vent Type | Adapter Description | Vent Mfr's P/N |
|-------------------|----------------------------|------------------------------------|----------------|
| DuraVent | FasNSeal AL29-4C | 9.85" Adapter to 10" FNS (Exhaust) | 810009853 |
| Heatfab/Selkirk | SAF-T Vent EZ SEAL AL29-4C | SlimFit Adapter to 10" | 910WMSF |
| Metal Fab Inc. | CORR/Guard AL29-4C | SlimFit Adapter to 10" | 10FCG9WMA |
| Nova Flex Group | Z-Vent AL29-4C | SlimFit Adapter to 10" | 2SVESFA1010 |



WEIL-McLAIN®

Weil-McLain
500 Blaine Street
Michigan City, IN 46360-2388
<http://www.weil-mclain.com>