WEIL-McLAIN®

SVF™ | STAINLESS VERTICAL FIRETUBE

NOTICE
Series Identification

Read the boiler rating label to determine the series number. The rating label is located on the back of the boiler.

Application Guide for Common Venting *SVF*™ 1500 / 2000 / 2500 / 3000 Boilers

Common Venting methods and requirements for boilers (*SVF*™ 1500 / 2000 / 2500 / 3000).

The boiler can be common vented when the following requirements are met.

- Common venting of the boiler can only be done in a Category II vent system. All requirements for the boiler to be vented in a Category II configuration must be met as stated in the ***SVF***™ Boiler Manual or all subsequent addendums.
- ***SVF***™ boilers can only be common vented with other ***SVF***™ Boilers.
- The maximum number of ***SVF***™ boilers to be common vented together is eight.
- The Vent system for a Category II ***SVF***™ boiler is considered a Designed / Engineered vent system and should be designed by a professional using accepted engineering practices.
- Vertical Vent only.
- Combustion air from the boiler room. See Direct Exhaust – Combustion Air opening requirements in ***SVF***™ Boiler Manual.
- The vent shall consist of a 3 foot piece of 8" or 10" diameter straight pipe (see Table 1, page 2 for model specific diameters) before any diameter or direction changes in the vent. See Figure 1 on page 3 for example.
- 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 Table 1, page 2, during all operating conditions i.e., High Fire, Low Fire, etc.
- Flue gas temperature should not exceed 210°F, the boiler will shut down and recycle if it does. The flue gas temperature should typically be within 20-30°F above 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.

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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.

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- 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 9.0% CO_2 on Natural Gas and the maximum flue gas temperature of 210°F. The values can vary depending on the location of the installation, operating conditions and fuel.
- A carbon monoxide detector(s) is required in the boiler room for ***SVF***™ 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*	*Stack / Vent flow rate*	*Negative Pressure to be maintained at Vent Connection of the boiler*	*Connection/Minimum Vent Diameter required for Category II*
	Btuh	*scfm*	*Inches w.c.*	(See Note 1)
SVF 1500	1,500,000	415	-0.001 to -0.100	8"
SVF 2000	1,999,000	553	-0.001 to -0.100	8"
SVF 2500	2,499,000	692	-0.001 to -0.100	10"
SVF 3000	3,000,000	830	-0.001 to -0.100	10"

Boiler vent and air connections:

The SVF boiler vent/air connection is sized for the following vent sizes/ materials:

1. SVF 1500/2000 8" Duravent-FasNSeal
2. SVF 2500/3000 10" Duravent-FasNSeal

Installer must provide the correct adapters/reducers needed to connect to other approved vent manufacturer's products.

⚠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 In applications where the venting system cannot maintain the required negative pressure on the boiler outlet via natural draft, 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 ***SVF***™ 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 Closure Switch on terminal block P11 of the boiler. 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.

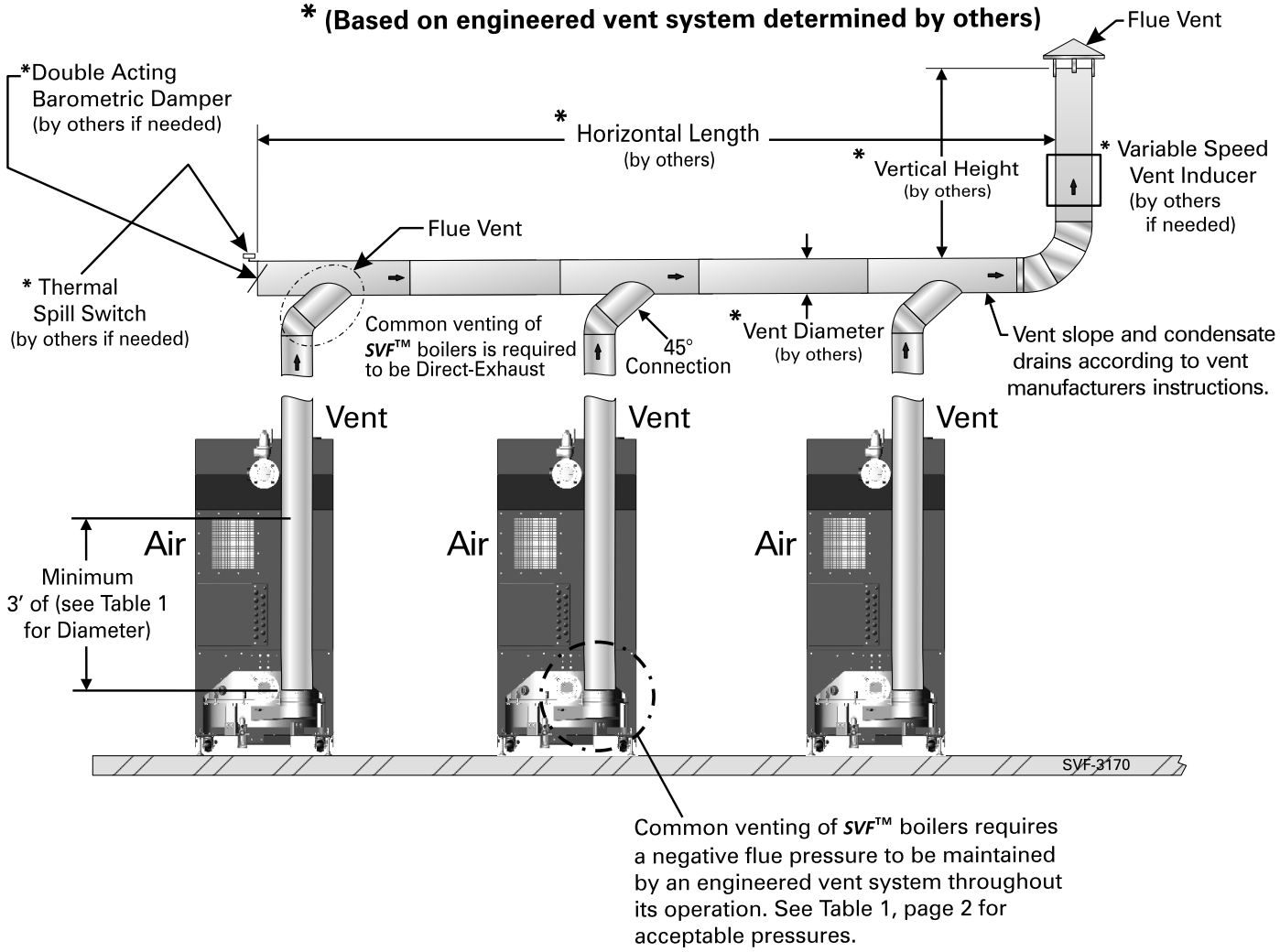
NOTICE When using a damper of any kind, it is recommended to use a thermal spill switch to detect any exhaust flow into the boiler room. Verify the temperature range on the thermal spill switch is adequate for the Flue gas temperature from the ***SVF***™ boiler. The use and set-point of this shall be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

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 - latest edition, 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.

The figure below represents a general common venting approach. The Vent system for a Category II SVF™ boiler is considered a Designed / Engineered vent system and should be designed by a professional using accepted engineering practices.

Figure 1 Common Vent Example



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