

UL-1777 & ULC-S635 Addendum to Installation Instructions

MODEL SWKL CHIMNEY LINER

This addendum applies to the Gas/Oil Vent & UL-103 Pressure Stack applications for Jeremias Model SWKL (including variations for SWKL, SWKL-Vt, and SWKL-Lt) single wall piping systems. Read and refer (also) to the main instructions when installing Model SWKL as a chimney liner.

Model SWKL is a rigid, stainless steel, single wall, modular, venting system used for a variety of applications. The joints are conical in design that overlap 2.2" when joined together. Refer to main installation instructions for the joint connection.

As a chimney liner, Jeremias Model SWKL is designed for use in code compliant masonry or factory-built chimneys to provide the flue gas venting of solid, liquid, and / or gas fired appliances as noted below.

UL-1777 Standard, Chimney Liners - under this Listing, all variations of Model SWKL have been determined suitable for venting flue gases from gas and liquid fuel fired appliances at a temperature not exceeding 570°F (299°C).

ULC-S635, (Canadian) Standard for Lining Systems for Existing Masonry or Factory-Built Chimneys and Vents - under this (c-UL) Listing, all variations of Model SWKL have been determined suitable for venting flue gases from gas, liquid and solid fuel fired appliances where the temperature of the flue gases does not normally exceed 650°C (1200°F).



These liners are intended to be installed in chimneys that comply with applicable code - NFPA211 (USA) and the National Building Code of Canada (or applicable Provincial version) - as relates to construction, clearances to combustibles, etc. Check to insure the masonry chimney is suitable for such use

GENERAL CONSIDERATIONS

Jeremias Model SWKL chimney liner is Listed per CAN/ULC-S635 as a "Class 3 Lining System" for use in existing masonry or factory-built chimneys and may be used with oil, gas or solid fuel-fired appliances where the temperature of the flue gas products does not normally exceed 650°C (1200°F). Many common gas, oil or solid fuel fired boilers, hot water heaters, warm air furnaces and some types of process heating or other specialty equipment including certain engine exhausts operate within such flue gas temperature range. Per its UL-1777 Listing, Model SWKL is limited to gas fired equipment applications for flue gas temperatures up to 570°F continuous and short term exposure up to 1700°F. If there is any question concerning whether Model SWKL is appropriate for use with certain equipment, contact Jeremias engineering department for assistance.

Installed in an existing masonry chimney under the terms of the CAN/ ULC-S635 Listing and in masonry chimneys under the terms of the UL1777 Listing, Model SWKL liner requires only sufficient space within the chimney to accommodate the installation. The minimum internal dimensions necessary for installation will be the liner inside diameter plus approximately 1", to allow for locking band worm gear/bolt assembly. For example, a 14" Model SWKL liner will require an approximate 15" minimum inside opening within an existing chimney.

The maximum height of a Model SWKL chimney liner will depend upon the diameter of the system being installed and the method of supporting the Model SWKL. See the main installation instructions for support options and use the maximum height limitations specified in the Vertical Support Spacing Limitations table.

The Model SWKL liner should extend a minimum of 12 inches above the masonry or steel chimney in which it is installed. Follow local code requirements for minimum spacing requirements of chimney terminations to surrounding structures and clearances to combustibles.

A rain cap or other Jeremias Model SWKL termination option is recommended for use with Model SWKL liners to reduce weather access to the inside of the flue. Listed caps with bird screens or spark arresters are necessary and/or required in some areas, but may be susceptible to blockage through freezing moisture in areas of low ambient temperatures. Consult the authority having jurisdiction for requirements in your area.

When Model SWKL extends above the existing chimney, a flashing or cover plate (may be generically made by the installer) is recommended to prevent moisture, debris, etc. from entering the area around the liner. The area surrounding the Model SWKL within the chimney may include an insulating material only if such insulating material is certified for use with Class 3 (all fuel) chimney liner systems and/or is otherwise acceptable to the authority having jurisdiction.

These instructions should be observed when installing Model SWKL Chimney Liner. Never substitute the actual chimney liner material (only cover plate, interior finishing of chimney penetration, and/or supports back to the chimney may be field fabricated). The safe operation of the Model SWKL lining system is based upon the use of parts supplied by Jeremias. The use or substitution of parts other than those supplied by Jeremias is not recommended, as they could affect the safety / performance of the system.

The SWKL chimney liner shall be sized not less than that specified in the appliance manufacturer's instructions. Correct sizing is important when venting appliances with low flue gas temperatures in geographical areas that experience sustained low ambient temperatures. The chimney liner should also be sized in a manner to reduce excessive amounts of condensation of moisture from flue gases, creosote build-up and weak draft. These factors are often consequences of an oversized chimney and can lead to a reduced service life for the system attributable to excessive condensation and premature corrosion of the system compared to a properly sized system. For similar reasons, oversized chimneys used on wood burning appliances can lead to excessive creosote buildup within the flue. Weak draft can lead to operational problems and reduced combustion efficiencies of the appliances. Contact Jeremias engineering department for support in selecting the correct size chimney liner.

Before beginning any installation of Model SWKL chimney liner system, contact the authority having jurisdiction (such as local building officials, fire department, gas inspection authority, etc.) about restrictions, installation inspection, and/or if a permit is required in your area. Acceptance of the chimney liner by the authority having jurisdiction is required based upon following these instructions. Warranty is also voided if these installation instructions are not followed.

Before installing Model SWKL, the masonry chimney should be thoroughly cleaned and inspected for any damage such as cracks, loose or missing bricks, mortar, or other missing/damaged materials that could inhibit correct installation of the chimney lining system. Damaged areas should be repaired prior to installation. Care should also be taken to ensure that the masonry chimney is clean and free from any buildup of creosote. Consult a certified Chimney Sweep if necessary.

If the Model SWKL is to be used to line an existing factory-built chimney or vent, such chimney/vent must be thoroughly cleaned and checked for structural defects. Such chimney/vent should also be checked to insure that all parts (supports, radiation shields,

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firestops, etc.) specified by the chimney/vent manufacturer are installed and that the air space clearances between the chimney or vent exterior casing an combustible material is in accordance with the installation instructions.

If the Model SWKL is also used as a connector between the appliance and the masonry chimney being lined, treat the Model SWKL as a single wall connector and follow local code requirements for minimum airspace clearance from combustibles to single wall connectors. If the connector penetrates a combustible wall between the appliance and the inlet to the chimney, follow local code requirements for passing such single wall connector through the wall and/or use a safety certified "Wall Pass-Through Device" for such purpose. The wall penetration shall not be located directly behind a heating appliance.

Whereas the UL1777 and CAN/ULC-S635 chimney liner standard contains no specifications for evaluating or testing chimney lining systems for positive internal pressure, the Model SWKL has been evaluated and listed for use in applications with a positive internal pressure of 90 inch water column.

Where offsets are required, the Model SWKL liner can use elbows if there is sufficient access/room for Jeremias supports to be used.

The maximum height of the Model SWKL chimney liner will depend upon the diameter of the system being installed and the method of supporting, see main Installation Instructions for support options and maximum height limitations.

The Jeremias Model SWKL chimney liner may be intermixed with other Listed Model DWKL and SWKL systems as part of an 'engineered' venting system. Maintain all proper air space clearance to combustibles

POSTING OF NOTICES

Upon completion of the installation the installer shall post in the room near the point where the connection is made;

1. Manufacturer's name and model number
2. Date of installation
3. Chimney liner Listings and use of specific fuels
4. Reminder to check rain cap for icing during low outside temperatures

Fig. 1, Posting Notice Example

NOTICE:
Chimney Liner is Model SWKL manufactured by Jeremias Inc.

- Date of Installation: _____
- This appliance is connected to a chimney liner which is Listed to ULC-S635 as a "Class 3 Lining System" for use with oil, gas or solid fuel-fired appliances with flue gas temperatures up to 650°F (1200°F).
- This appliance is connected to a chimney liner which is Listed to UL-1777 for use with gas and oil fired appliances with flue gas temperatures up to 570°F continuous and up to 1700°F for 10 minutes.
- Check rain cap for icing during low ambient temperatures.

GENERAL MAINTENANCE CONSIDERATIONS

The Model SWKL chimney liner should be inspected (and cleaned if necessary) periodically (at least once per year) during the course of use. More frequent inspections are appropriate during the first period of use in order to gauge the tendency for any accumulations that may need to be removed. Later, as inspections

and cleaning data has been gathered over a period of time, it may be appropriate to reduce the frequency.

Failure to inspect and clean this chimney liner could result in premature corrosion, the buildup of dangerous deposits within the lining system (See "Creosote" below) and/or other, potentially dangerous, operational problems.

Model SWKL can be accessed from the top by removal of the rain cap, and/or at the base through an access door. Clean the Model SWKL chimney liner with conventional chimney brushes of the correct same, nominal diameter as the flue.

Creosote - Formation and Need for Removal:

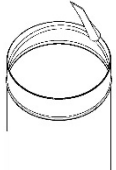
When wood is burned slowly, it produces tar and other organic vapors, which combine with expelled moisture to form creosote. The creosote vapors condense in the relatively cool chimney flue of a slow burning fire. As a result, creosote residue accumulates on the liner. When ignited, this creosote makes an extremely hot fire.

The liner should be inspected at least periodically during the heating season to determine if a creosote build-up has occurred. If a significant layer of creosote has accumulated (1/8" / 3mm or more) it should be removed to reduce the risk of a chimney fire."

JOINT ASSEMBLY


The Model SWKL joint system is designed for a quick and easy installation. Follow Steps 1 through 4 for general pipe and fittings assembly - also see main instructions for important joint details and KL-Paste requirements.

Figure A1-1, Model SWKL Assembly



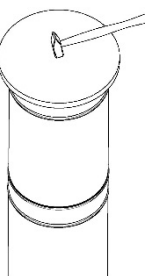
Step 1

Clean the inner side of the female end (top end) and the outer side of the male end of each pipe. Apply the KL Paste to the female end.



Step 2

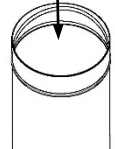
Use your hands to center both pipes in alignment. Connect both pipes and press them together as much as possible by hand.

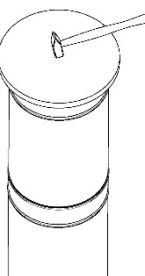


Step 3

Use the wood plate (supplied with shipment) and place it on the end of the assembly.

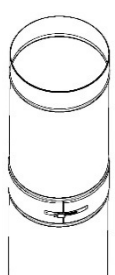
Tap 2-3 times until the male/female conical ends are engaged.





Step 4

Install and fix the Locking Band (LB). To ensure the connection is secure, the Locking Band has to be fit over both grooves. If the Locking Band does not fit over the grooves, the joint needs to be tapped more in order to engage further.



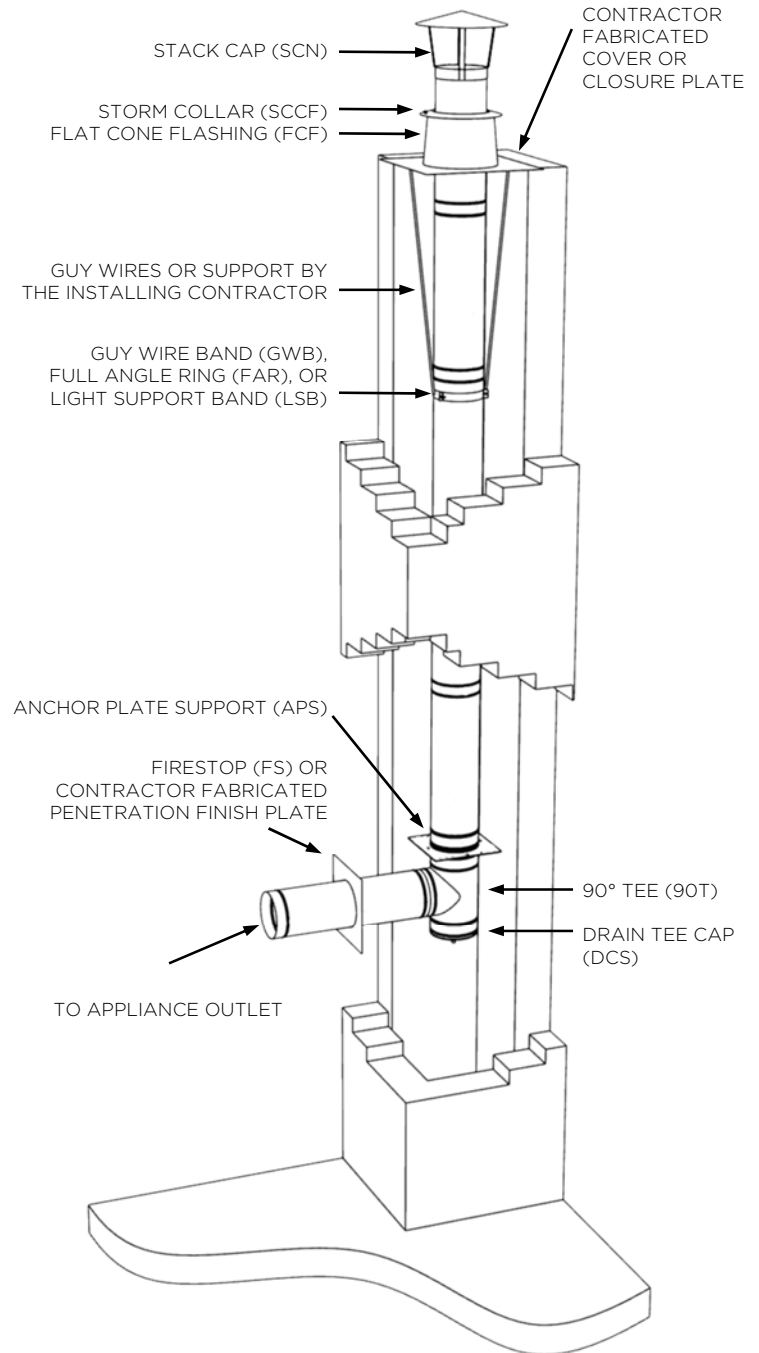
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GENERAL INSTALLATION GUIDELINES

Typical Installation Procedure:

1. At the location where the vent system penetrates the masonry wall, the opening should be large enough to allow access for installation of the APS Anchor Plate Support, FAR Full Angle Ring, LSB Light Support Band, or the GWB Guy Wire Band (whichever is to be used). It may be necessary to provide further openings for purpose of guiding and/or resupport of the liner. See the main installation instructions for maximum spacing between supports and guides, the spacing dimensions may be extended or eliminated depending on the inside face of the masonry chimney. Contact Jeremias engineering department for further details.
2. If there is space inside the chimney and the APS Anchor Plate Support is planned to be used, the structural framework (by the installing contractor, see main instructions for support options) for same must be installed so as to permit installation and attachment at the desired location so the snout of the tee will be located at the intended elevation.
3. Determine the overall length of the system by measuring from the prepared opening to 2 feet above the top of the masonry chimney.
4. Select pipe lengths necessary to accommodate total required length determined by step 3.
5. Gather all necessary component parts and start at the top of the chimney. This should consist of the 90° Tee with Tee Cap (or extra pipe extension to floor with Tee Cap Access and Universal Inline Drain), Anchor Plate Support and/or Guy Wire Band, Termination, the required pipe lengths, and required KL-Paste and assembly tools.
6. If the APS Anchor Plate Support is used, connect the APS Anchor Plate Support above the tee and start lowering it down the chimney. Add lengths of pipe and continue to lower down the chimney till the anchor plate rests on the bracing as mentioned in step 2. Once the Anchor Plate Support comes to rest on the bracing, bolt the plate and bracing together.
7. If guy or support wires are used, connect the GWB Guy Wire Band, FAR Full Angle Ring, or LSB Light Support Band to a pipe length and start lowering the assembly down the chimney. Add lengths of pipe and continue to lower down the chimney to desired elevation. Permanently connect the support wires back to the chimney or building structure. Follow main instructions for guide support spacing as more than one guide might be required.
8. Add lengths of pipe or fittings necessary to extend from the tee snout to the outlet of the appliance.
9. After the system is connected to the appliance and checked for proper installation, including clearances to combustible surfaces, proper support and proper component parts, a trim collar (can be generically made by the installer) can be used to give a finished appearance.
10. Weatherize the system at the top with the use of a flat roof flashing with storm collar (or generically made flashing by the installer), and rain cap.

Fig A1-2, Typical Chimney Lining System



NOTE:
ALL SUPPORT OPTIONS SHOWN ARE NOT BE REQUIRED FOR AN INSTALLATION.

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NOTES



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