

ACCESSORY

Installation Instructions

Tile - Lined Masonry Chimney Kit

GENERAL INFORMATION

Tile-lined Masonry Kit Number 921066 allows the venting of an 80% induced draft furnace to be vented into a properly sized masonry lined chimney, without installing a metal liner. The kit can be used on Category I Upflow Furnaces with model numbers *G7SA and *GC2SA. See Table 1 (page 4).

This kit is only to be used on upflow installations. The kit is not intended to be used with horizontally installed furnaces, or on lateral vent lengths that exceed lengths specified in Table 2 (page 4) and Table 3 (page 5).

SAFETY INFORMATION

Safety markings are used frequently throughout this manual to designate a degree or level of seriousness and should not be ignored. **WARNING** indicates a potentially hazardous situation that if not avoided, could result in personal injury or death. **CAUTION** indicates a potentially hazardous situation that if not avoided, may result in minor or moderate injury or property damage. **NOTES** are intended to clarify or make the installation easier.

CAUTION:

For your safety, read and understand the instructions before installing the kit.

WARNING:

Improper installation may create a condition where the operation of the product could cause personal injury or property damage.

Improper installation, adjustment, alteration, service, or maintenance can cause injury or property damage. Refer to this manual for assistance or additional information. Consult a qualified installer, service agency or the gas supplier.

REQUIREMENTS AND CODES

This furnace should be installed in accordance with all national and local building and safety codes and requirements, or in the absence of local codes, with the National Fuel Gas Code, ANSI Z233.1 - (latest edition) or in Canada, The National Canadian Installation Code CAN/CGA B149.1 or B149.2- (latest edition), and other applicable codes.

CAUTION:

This product must be installed in strict compliance with these installation instructions and any applicable local, state, and national codes including but not limited to building, electrical and mechanical codes.

- The furnace shall not be connected to a chimney flue serving a separate appliance designed to burn solid fuel.
- This kit may be used in any building in which the space surrounding the furnace is not depressurized by more than 0.02 in w.c. (5 Pa) below outdoor pressure by equipment such as exhaust fans or clothes dryers.
- Seal any unused openings in the venting system. Inspect the venting system for proper size and horizontal pitch as required in the National Fuel Gas Code, ANSI Z233.1 or CAN/CGA B149.1 or B149.2 Canadian Installation Codes, and these instructions. Verify that there is no blockage, restriction, leakage, corrosion or other deficiencies which could cause an unsafe condition. See Figure 1 (page 3)
- Table 2 shall be used when Type-B, double walled vent connector is attached to a tile lined masonry chimney serving a single furnace.
- Table 3 shall be used when Type-B, double walled vent connector is attached to a tile lined masonry chimney serving one or more draft hood equipped appliances.
- Tables 2 & 3 are designed for two 90° elbows or equivalent. If additional elbows are used, five feet should be subtracted for each elbow from the above values.
- High altitude installation input rates shall be derated starting at 2000 ft. altitude. Sea Level input rates shall be used for chimney sizing and venting guidelines. Refer to High Altitude and LP conversion Kit (PN 904914).
- Vent connector length is limited to 1-1/2 ft. for each inch of vent connector diameter.
- Vent connectors shall not be sized more than two sizes greater than the listed appliance vent outlet diameter.
- For multiple appliance installations, the flow area of the chimney shall not exceed 7 times the smallest draft hood outlet area.

CLEARANCE REQUIREMENTS

Minimum clearances to combustibles for the furnace that the kit is applied shall be maintained. This kit shall not be used on any model other than the models listed in Table 1. The room temperature surrounding the furnaces and vent connectors shall be 60° F (42° C) or warmer.

MASONRY CHIMNEY REQUIREMENTS

If a clay tile-lined masonry chimney is used, an alternative venting design might be required, such as a listed chimney lining system or this listed chimney adapter kit. **USE ONE OF THE FOLLOWING METHODS TO DETERMINE IF AN ALTERNATIVE VENTING DESIGN IS NOT REQUIRED.**

- In the U.S.A. - Refer to Sections 11,2,9 and 11.3.18 of the NFGC or authority having jurisdiction to determine whether relining is required. If relining is required, use a listed metal liner, Type B vent, or a listed alternative venting design, such as this listed chimney adapter kit (with a furnace listed for use with this kit), a listed chimney lining system, or a Type B common vent.
- In Canada (also permitted in the U.S.A.) an 80 percent AFUE, hot surface ignition, Category I, fan assisted furnace is permitted to be vented into a clay tiled-lined masonry chimney that is exposed to the outdoors below the roof line, provided:

Single Appliance

Figure 3 (page 6) displays a single furnace vented into a tile lined masonry chimney. Category I, fan assisted furnaces without draft hoods **are not permitted** to be vented into clay tile lined masonry chimneys that are exposed to the outdoors below the roof line.

Multiple Appliances

A single furnace may be common-vented with draft hood-equipped water heater(s) into the chimney as shown in Figure 4 (page 6).

- Vent connector is Type-B double-wall, and
- The furnace is common vented with at least 1 draft hood equipped appliance, and
- The combined appliance input rating is less than the maximum capacity, given in Table 3, and
- The authority having jurisdiction approves.

If all of these conditions cannot be met, an alternative venting design is required, such as this listed chimney adaptor kit (with a furnace listed for use with this kit), a listed chimney lining system or a Type-B common vent.

INSTALLATION OF CHIMNEY KIT ASSEMBLY

1. Shut off the power and gas supply to the furnace.
2. Turn off gas supply to the furnace at the manual valve.
3. Remove burner access door.
4. Attach the chimney kit onto the flue outlet of the furnace.
5. Secure the chimney kit to the furnace in two places.
6. Route the wire harness from the chimney kit through the low voltage hole, into the furnace cabinet. See Figure 2 (page 5).
7. Remove the insulated wire from the Main Air switch and connect it to the chimney kit wire harness lead.
8. Connect the second lead from the chimney kit wire harness to the primary limit terminal.

9. Secure the wire harness from the chimney kit to the cabinet with the wire clips provided. **NOTE:** All excess wire should be fastened inside the furnace with the cable tie wrap provided in the parts bag.
10. Attach the proper size vent pipe and secure the pipe to the chimney kit. (See Tables 2 or 3 for proper size)



WARNING:

The wire should be secured away from the burner compartment, live metal, or rotating parts.

PLACING THE FURNACE INTO OPERATION

1. Verify that all the electrical connections that were made while installing the chimney kit are secure.
2. Inspect the vent system for any leakage, corrosion, or restrictions.
3. Close all doors and windows including doors that are in the same room as the furnace. Turn on all exhaust fans (range hoods, bathroom fans) not including summer exhaust fans. Fireplace dampers should be closed.
4. Turn on the power to the furnace and open manual gas valve.
5. Adjust the thermostat and allow the furnace to operate for at least 10 minutes. After 10 minutes, check for vent gas spillage at the draft openings with the open flame of a match or candle.
 - If the furnace is installed where it is common vented to another draft hooded appliance(s) (i.e. water heater), follow operating instructions and adjust for continuous operation.
6. Check for spillage at the draft hood of the other appliance(s) and again at the chimney kit.
 - If any flue gas spillage is detected from any of the draft hoods, the vent system and the connections must be corrected.
7. Once proper installation and operation are verified, turn off the appliance, return fans and vent dampers to their original position.

INSTALLER

PLEASE LEAVE THESE INSTALLATION INSTRUCTIONS WITH THE HOMEOWNER FOR FUTURE REFERENCE.

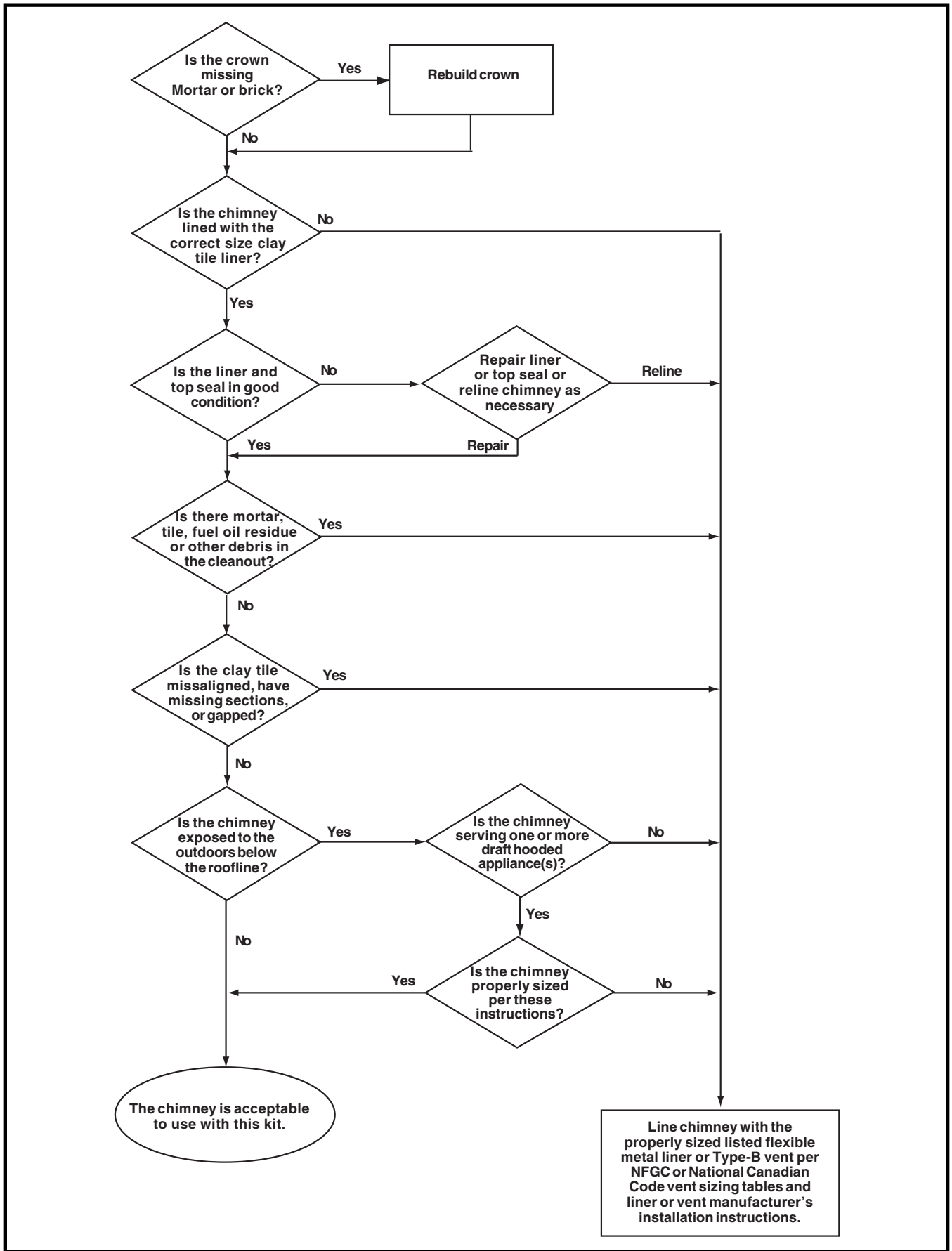


Figure 1. Chimney Inspection Chart

APPROVED FURNACE MODEL NUMBERS	TILE-LINED MASONRY CHIMNEY KIT NUMBER	FURNACE FLUE OUTLET SIZE
*G7SA 045-23A / *GC2SA 045-23A	921066	4"
*G7SA 054-23A / *GC2SA054-23A		
*G7SA 072-24B / *GC2SA072-24B		
*G7SA 090-24B / *GC2SA090-24B		
*G7SA 072-35C / *GC2SA072-35C		
*G7SA 090-35C / *GC2SA090-35C		
*G7SA 108-35C / *GC2SA108-35C		
*G7SA 126-45D / *GC2SA126-45D		

Table 1. Tile - Lined Masonry Chimney Kit Model Listing

INTERIOR CHIMNEYS ONLY							
Height H (ft)	Lateral L (ft)	Type B Double Wall Connector Diameter - D (inches) To be used with chimney areas within the size limits at the bottom of the table					
		3"	4"	5"	6"	7"	8"
		Appliance Input Rate (Thousands of BTU per Hour)					
		NAT Max.	NAT Max.	NAT Max.	NAT Max.	NAT Max.	NAT Max.
6	2	28	52	86	130	180	247
	5	25	49	2	117	165	230
8	2	29	55	93	145	198	266
	5	26	52	88	134	183	247
	8	24	48	83	127	175	239
10	2	31	61	103	162	221	298
	5	28	57	96	148	204	277
	10	25	50	87	139	191	263
15	2	35	67	114	179	250	336
	5	35	62	107	164	231	313
	10	28	55	97	153	216	296
	15	NA	48	89	141	201	281
20	2	38	74	124	201	274	375
	5	36	68	116	184	254	350
	10	NA	60	104	172	237	332
	15	NA	NA	97	159	220	314
	20	NA	NA	83	148	206	296
30	2	41	82	137	216	303	421
	5	NA	76	128	198	281	392
	10	NA	67	115	184	263	373
	15	NA	NA	107	171	243	353
	20	NA	NA	91	159	227	332
	30	NA	NA	NA	NA	188	288
50	2	NA	92	161	251	351	477
	5	NA	NA	151	230	323	445
	10	NA	NA	138	215	304	424
	15	NA	NA	127	199	282	400
	20	NA	NA	NA	185	264	376
	30	NA	NA	NA	NA	NA	327
Minimum internal area of chimney (inch ²)		12	19	28	38	50	63
Maximum internal area of chimney (inch ²)		49	88	137	198	269	352

Table 2. Capacity of Masonry Chimney Flue with Type B Double Wall Vent Connectors Serving a Single Furnace.

INTERIOR AND EXTERIOR CHIMNEYS							
Height H (ft)	Lateral L (ft)	Type B Double Wall Connector Diameter - D (inches)					
		3"	4"	5"	6"	7"	8"
		Appliance Input Rate in Thousands of BTU per Hour					
		NAT Max.	NAT Max.	NAT Max.	NAT Max.	NAT Max.	NAT Max.
6	1	21	40	67	101	141	201
	2	28	52	85	124	173	232
	3	34	61	97	143	203	270
8	1	22	41	69	105	148	210
	2	29	53	86	127	179	240
	3	34	62	98	145	206	276
10	1	22	42	71	108	153	216
	2	29	54	87	129	184	247
	3	35	63	100	148	209	281
15	1	23	44	74	114	164	229
	2	31	55	89	134	192	260
	3	35	64	102	153	215	292
20	1	24	46	77	119	173	239
	2	31	56	91	138	199	270
	3	35	65	104	157	222	301
30	1	25	48	82	127	187	255
	2	32	58	95	145	209	287
	3	36	66	104	163	233	316
50	1	25	51	89	143	213	294
	2	32	61	102	161	235	326
	3	36	69	115	180	260	357

Table 3. Capacity of Masonry Chimney Flue with Type B Double Wall Vent Connectors Serving a Furnace with 2 or more draft hooded appliances

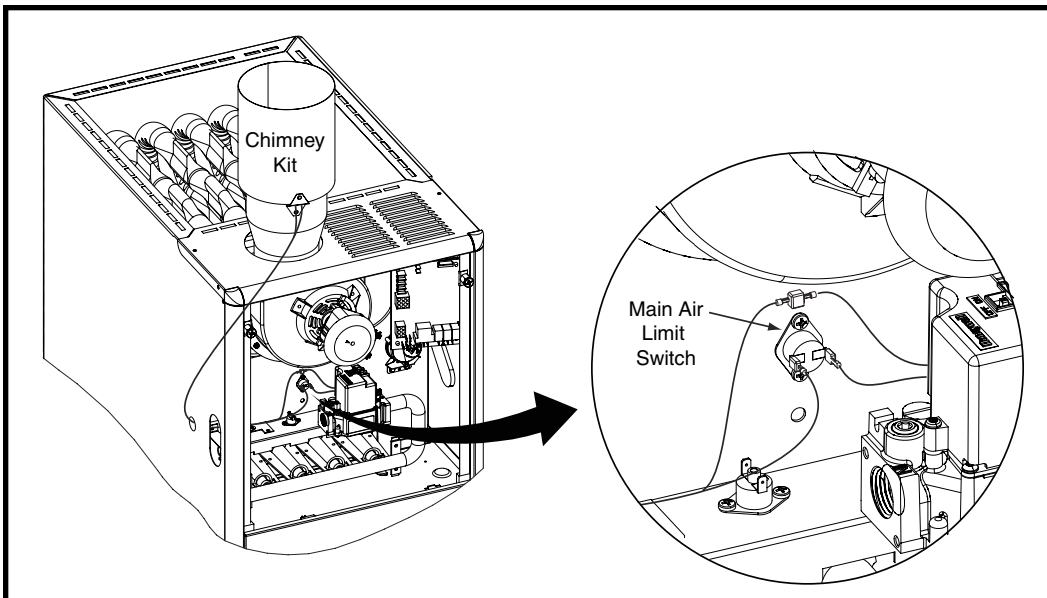


Figure 2. Chimney Kit Installation

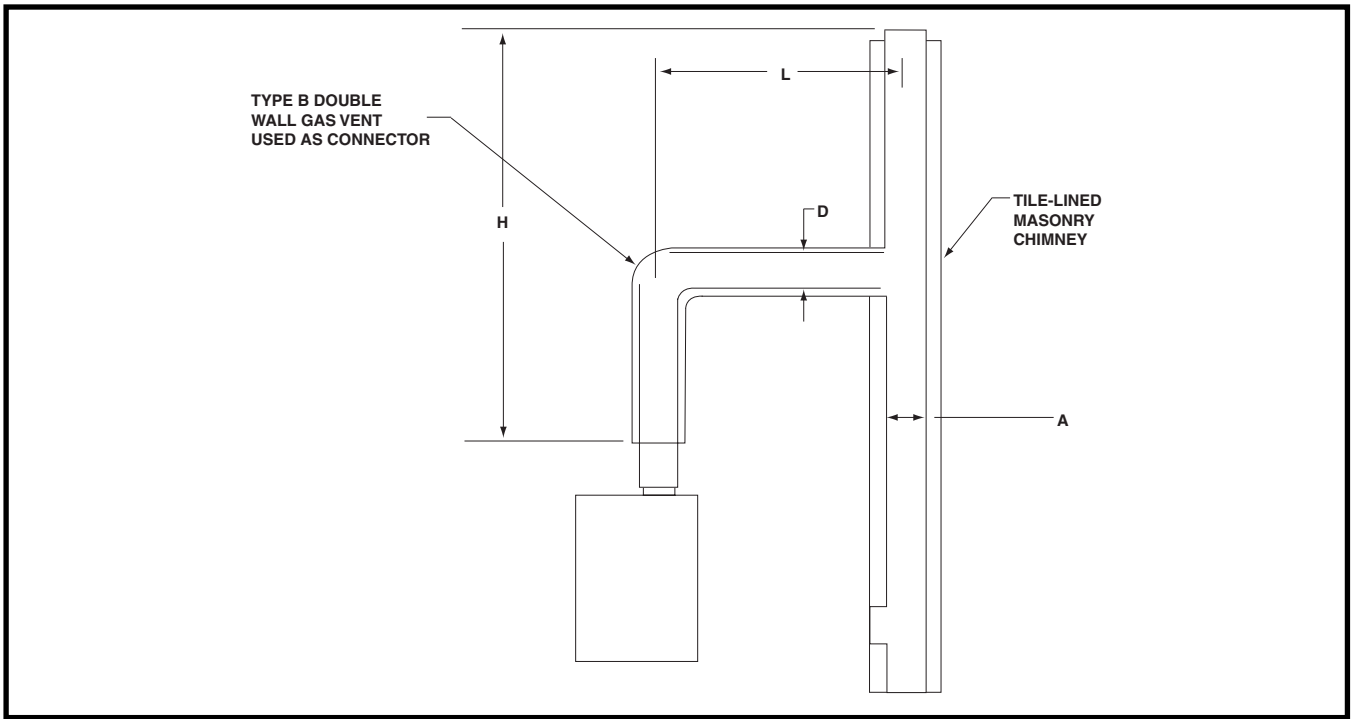


Figure 3. Single Furnace Installation

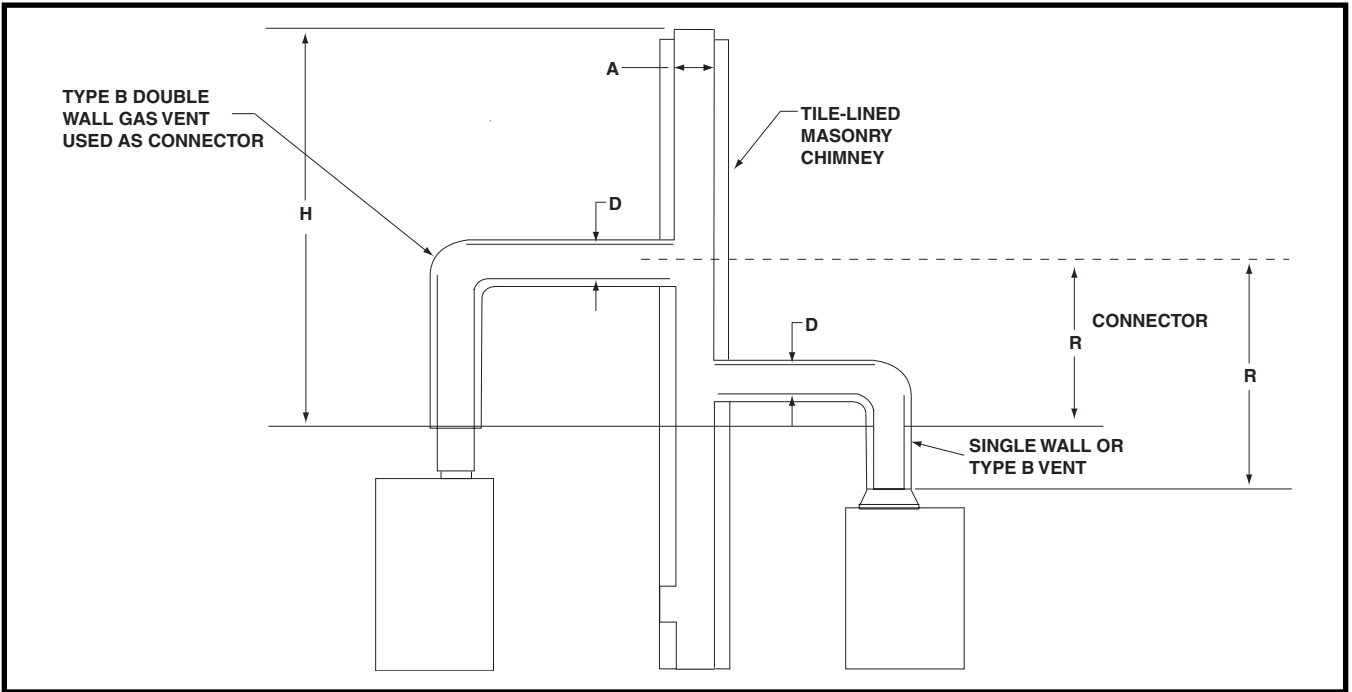


Figure 4. Multiple Appliance Installation

