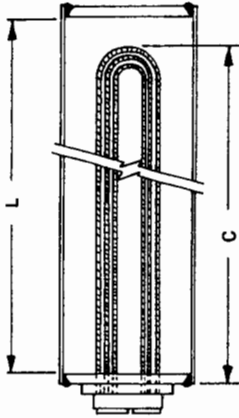
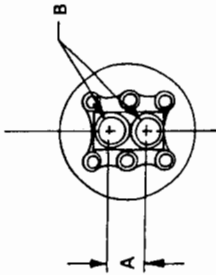


**DIMENSIONAL DATA**

COIL TYPE	COIL DIMENSIONS		C COIL INSERTION LENGTH
	A DISTANCE BETWEEN TAPPINGS	B HOT AND COLD TAPPINGS (IFS)	
F	3 3/4"	1 1/2"	SEE TABLE 1 ABOVE (SEE NOTE 3)
BF	3 1/2"	2"	
B	3 1/2"	2"	
D	4 5/8"	2 1/2"	



BOILER HEADER DIMENSIONS "L"
MAXIMUM COIL INSERTION LENGTH
SEE TABLE 2 ABOVE

**APPLICATION NOTES**

- The length of the boiler drum determines the size of the coil or coils that can be installed. The F and BF type coils are recommended for use only in the F or D Series boilers. The B and D type coils can be used in all boilers except the F or D Series boilers.
- One coil can be installed in either end of the single upper drum in the F, D, Cl, K and R Series boilers, or a maximum of two (2) coils. One coil can be installed in either end of each of the two upper drums of the L and LM Series boilers, or a maximum of four (4) coils. Refer also to note 7.
- The length of the coil is the last set of numbers in the coil model designation, measured in inches. These insertion lengths are shown in Table 1, above. The total insertion length of a coil or coils that can be installed in a boiler drum cannot exceed the boiler drum length listed in Table 2 for the boiler to be used.
- The coil capacities available are listed for the temperature and flow conditions noted in Table 1. For conditions other than shown in Table 1, use standard conversion charts or calculations. Note that, for storage tank systems, the recommended circulation rate between the tank and the coil(s) is equal to the Recovery Rate in GPM. Refer to Form SK-1618 for recommended piping arrangement. Refer to Forms 1233 and 1280 for coil pressure drops.

- It will be noted that the coil capacities listed in Table 1 are in most cases less than shown with our standard WT or WP heaters. The reason for this is that when a heat exchanger coil is installed as part of a multi-purpose system, it is usually sized for less than the full capacity of the boiler. Under this condition, the burner will not fire continuously and the velocity of boiler water circulation around the coil is lowered, causing reduced heat transfer.
- For single purpose applications requiring heat exchangers for full boiler output, use the Bryan Indirect Water Catalogue (WT Series), Form 630, for equipment selections.
- When applying coils to L and LM water boilers, if the required coil capacity is greater than 25% of the boiler output, divide the coil load and use two coils, one in each drum. This will balance the boiler water temperatures.
- Full boiler output cannot be obtained from heat exchangers with Cl Series larger than model CH210 or L or LM Series larger than model L72 with standard water boiler.
- For coils installed in low pressure steam boilers, some of the coil is above the water level, and some below. Assuming steam pressure is maintained constantly, coil capacity is the same as a hot water boiler with 220°F water temperature. Coils cannot be installed in high pressure steam boilers (pressure over 15 psig.)

**COIL SELECTION PROCEDURE**

- Procedure**
- Determine the basic boiler load - other than the heat exchanger coil load. (Space heating, steam process, or other.)
  - Determine the type of coil (or coils) required - Tankless (gallons per minute), Tank Circulation (gallons per hour), Temperature Rise, Boiler Water Temperature.
  - Determine the overall coil requirement in terms of maximum BTU's per hour at peak load.
  - Determine the overall capacity and model number of the boiler, adding the coil load (if necessary) to the primary boiler load.
  - Select the appropriate coil (or coils) model from the Selection Chart, Table 1.
  - Check - will the coil (coils) selected fit into the available drum length of the boiler selected. (Keep in mind 7 above.)

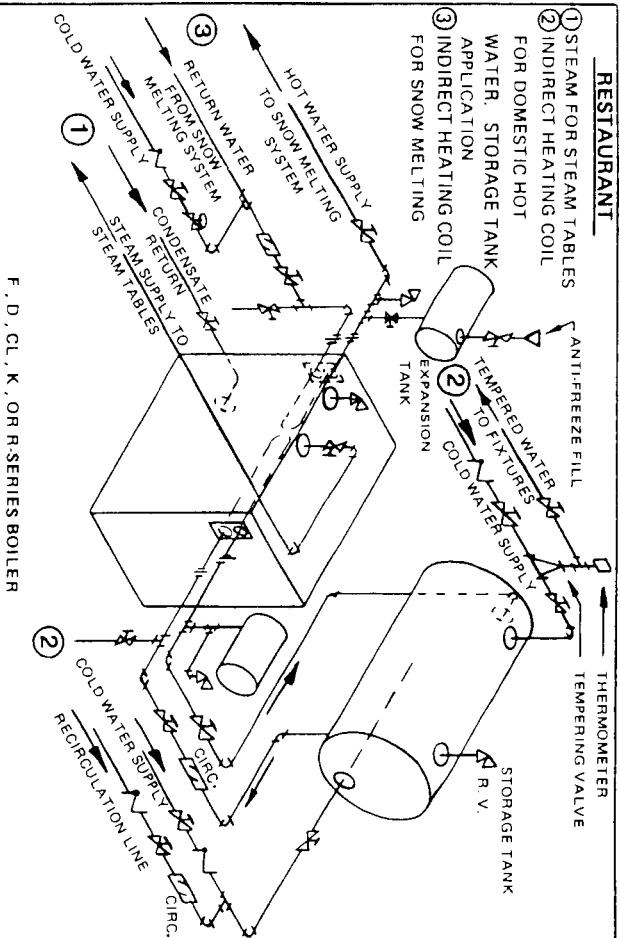
**Example**

- A small apartment house has a heat loss of 1,100,000 BTU/hr.
- The boiler is to have a tankless domestic service hot water coil, requiring 18 gpm, 40° to 140° at 180° boiler water temperature.
- Although the instantaneous coil selected - 18 gpm - will require 900,000 BTU/hr during peak draw, the actual maximum hourly domestic hot water load is estimated at 250,000 BTU/hr.
- Total boiler output required is 1,100,000 BTU/hr (heat loss) + 250,000 BTU/hr (domestic coil) = 1,350,000 BTU/hr total. Because the 250,000 BTU/hr (domestic) is greater than the 15% piping and pickup factor normally used for a hot water boiler, no further consideration need be given to this. A Bryan Model CL180 with a gross output of 1,440,000 BTU/hr is selected.
- From the Coil Selection Chart, Table 1, under Column 2 (40° to 140° at 180° boiler), we select a Model D8-40-51 coil rated at 1150 gph (19 gpm) to handle the 18 gpm requirement.
- This coil is 51" long, fitting easily into the 65" long drum of the Model CL180 boiler.

# TYPICAL APPLICATIONS

## RESTAURANT

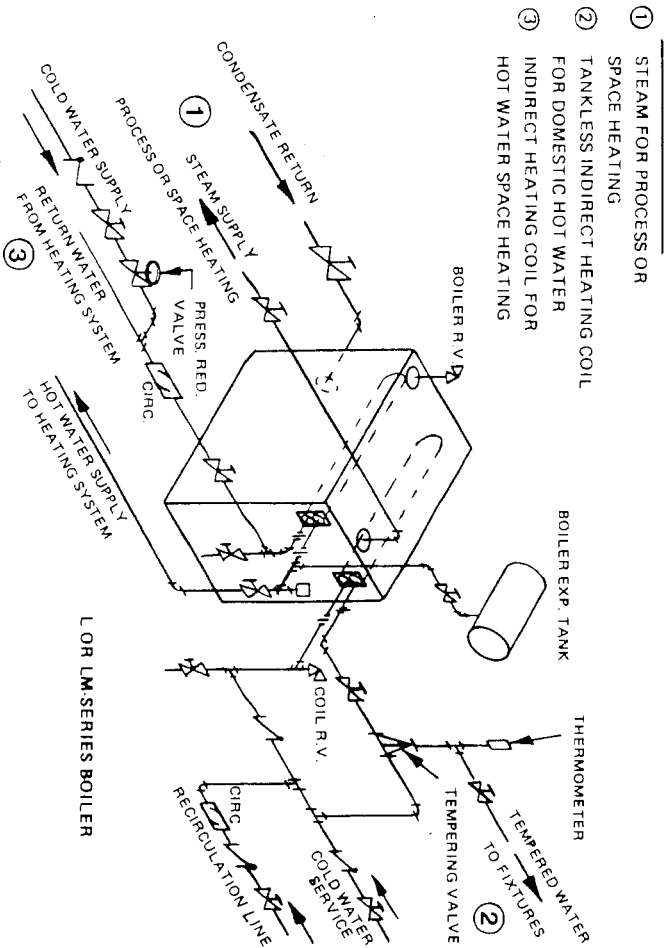
- ① STEAM FOR STEAM TABLES
- ② INDIRECT HEATING COIL FOR DOMESTIC HOT WATER, STORAGE TANK APPLICATION
- ③ INDIRECT HEATING COIL FOR SNOW MELTING



F, D, CL, K, OR R-SERIES BOILER

## FACTORY

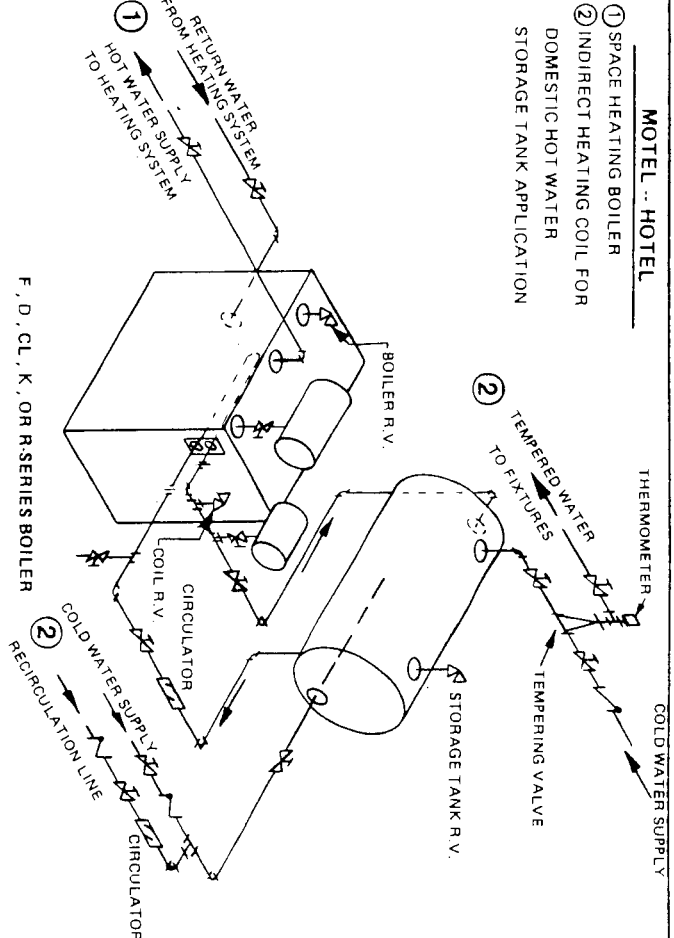
- ① STEAM FOR PROCESSOR OR SPACE HEATING
- ② TANKLESS INDIRECT HEATING COIL FOR DOMESTIC HOT WATER
- ③ INDIRECT HEATING COIL FOR HOT WATER SPACE HEATING



L OR LM-SERIES BOILER

## MOTEL .. HOTEL

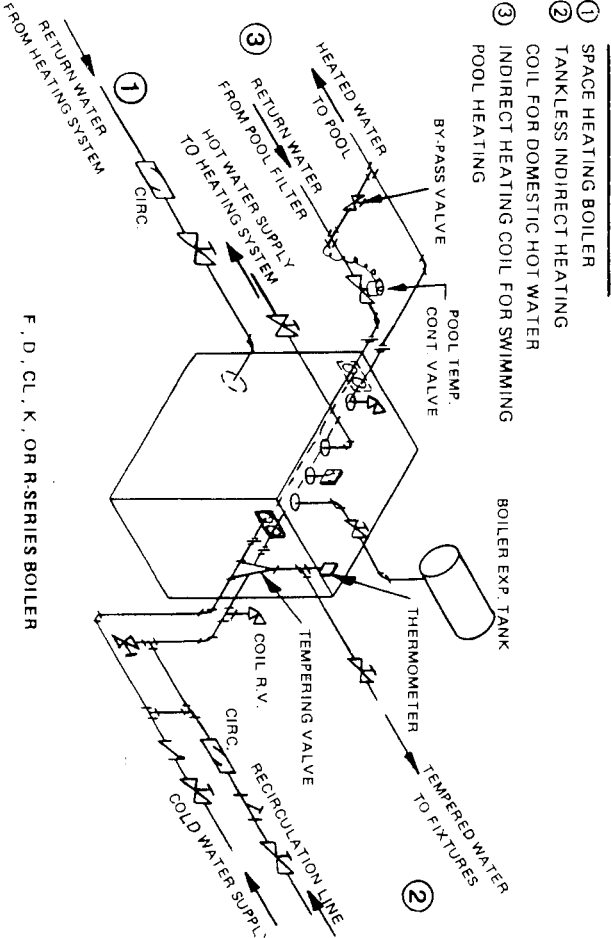
- ① SPACE HEATING BOILER
- ② INDIRECT HEATING COIL FOR DOMESTIC HOT WATER STORAGE TANK APPLICATION



F, D, CL, K, OR R-SERIES BOILER

## APARTMENT HOUSE

- ① SPACE HEATING BOILER
- ② TANKLESS INDIRECT HEATING COIL FOR DOMESTIC HOT WATER
- ③ INDIRECT HEATING COIL FOR SWIMMING POOL HEATING



F, D, CL, K, OR R-SERIES BOILER