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|----------------------------------|-----------------------|---|
| 1 Cooling load                   | 7 Expansion tank      | 13 Make up water supply                   |
| 2 Chilled water pump (primary)   | 8 Flue pipe           | 14 Minimum tank capacity 1 m <sup>3</sup> |
| 3 Chilled water pump (secondary) | 9 Cooling tower       | 15 Fuel supply                            |
| 4 Bypass valve                   | 10 Cooling water pump | 16 To drain channel                       |
| 5 Supply header                  | 11 Blow down valve    |   |
| 6 Return header                  | 12 Bypass valve       |   |

**General remarks on piping**

- 1) Equipment and parts outside the area surrounded by the broken line are not supplied by SANYO/Carrier.
- 2) For pipe connections and diameter refer to the dimensional drawings and specification tables.
- 3) Ensure that chilled/hot water flow rate, cooling water flow rate are in conformity with the standard value. If the chilled water flow rate sinks to under 50% of the standard value, the chiller will stop.
- 4) Position the chilled/hot water pump, cooling water pump and expansion tank correctly so that the chiller pressure does not exceed the set value.
- 5) For cooling water temperature control refer to the drawing "Cooling water temperature control method".
- 6) Separate chilled/hot and cooling water pumps should be provided for each chiller.
- 7) Provide a cooling water blow-down valve in the cooling tower inlet for water quality control.
- 8) Install a filter in the chilled/hot water and cooling water pipes (10 mesh).
- 9) Install stop valves on the chilled/hot and cooling water inlet and outlet.
- 10) Provide a thermometer and pressure gauge at the chilled and cooling water inlet and outlet.
- 11) Provide an air vent valve in each of the chilled/hot and cooling water line at a point higher than the header.
- 12) Install drain valves at the lowest positions between absorption chiller and the stop valves of the chilled water and cooling water and smoke chamber, and pipe them to the drain channel.
- 13) Provide an expansion tank at highest position in the chilled/hot water line.
- 14) Install a cooling tower away from any exhaust gas outlet.
- 15) Provide heat insulation to the flue pipe and condensate drain pipe.
- 16) Do not connect the flue pipe to the smoke stack of incinerator.
- 17) In case of using one flue pipe for several chiller, each pipe has to prevent to wrap-around of exhaust gas.
- 18) Provide a draft regulator, if the static pressure inside the flue pipe vary.
- 19) Connect the pipe from rupture disk to tank.
- 20) Install stop valves between the absorption chiller and stop valves of all inlets and outlets for chemical cleaning of the water circuit system.



**Typical Piping diagram**

Model	<b>TSA-16DJ</b>
Drawing code	<b>CM-013-001-01-1</b>