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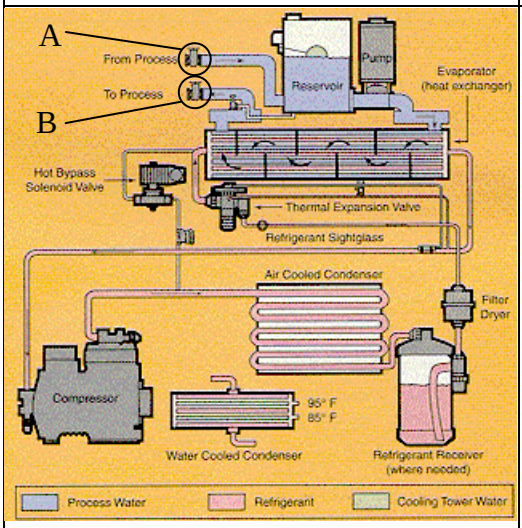
CHILLER

Chillers are cooling units for water and other process fluids. Thermal energy is turned into freezing energy by an absorption freezing cycle, in which the coolant changes its state in combination with the substance used as absorbent.
Thanks to their versatility, these units are widely used in the food industry: for cooling mineral water, juices, syrups, fermented wort, and water solutions of liquors; drinking water used in manufacturing pasta; water used in cooling rolling boards for candies, chocolate, icing and condensed milk. In the mechanical and other industrial applications, chillers are used for cooling water in moulds, lubrication oils in tools, water in rollers in the paper industry.

PLANT DESIGN



PAV - A
Media: Water
Pressure: 2,5 bar
Temperature: 50°C
Seal: PTFE

PAV - B
Media: Water
Pressure: 2,5bar
Temperature: 10° C
Seal: PTFE

APPLICATION

Chillers are made up of a compressor, a condenser and an evaporator. The system consists of two hydraulic circuits, one for the coolant and one for water or for the process fluid to be cooled.

Cooling Circuit
The coolant coming from the evaporator is compressed and sent to the condenser by the compressor in the form of high temperature gas.
By entering the condenser, the coolant turns into hot liquid, it is then controlled by the expansion valve and turns into cold gas. The gas goes into the evaporator and absorbs heat by getting in contact with process hot water. Then its cooling cycle starts again.

Process Fluid Circuit
Valve (A) controls process hot water and sends it to the evaporator, which works as a heat exchanger. When it gets in contact with the coolant, hot water yields its heat, cools and is then controlled by valve (B) to be sent to its process again.

SOLUTION

TYPE BSG206SXX00 / SXS code 75883730493

Normally Closed Bi-Directional S/S PAVs
Body Actuator Ø63 – Connection ¾”BSP
Flow Direction over / under seat
Pilot pressure over seat min. 6 bar
Pilot pressure under seat min. 3,8 bar
Pilot pressure max 10 bar
Working Pressure 0-16 bar
Seal Material PTFE