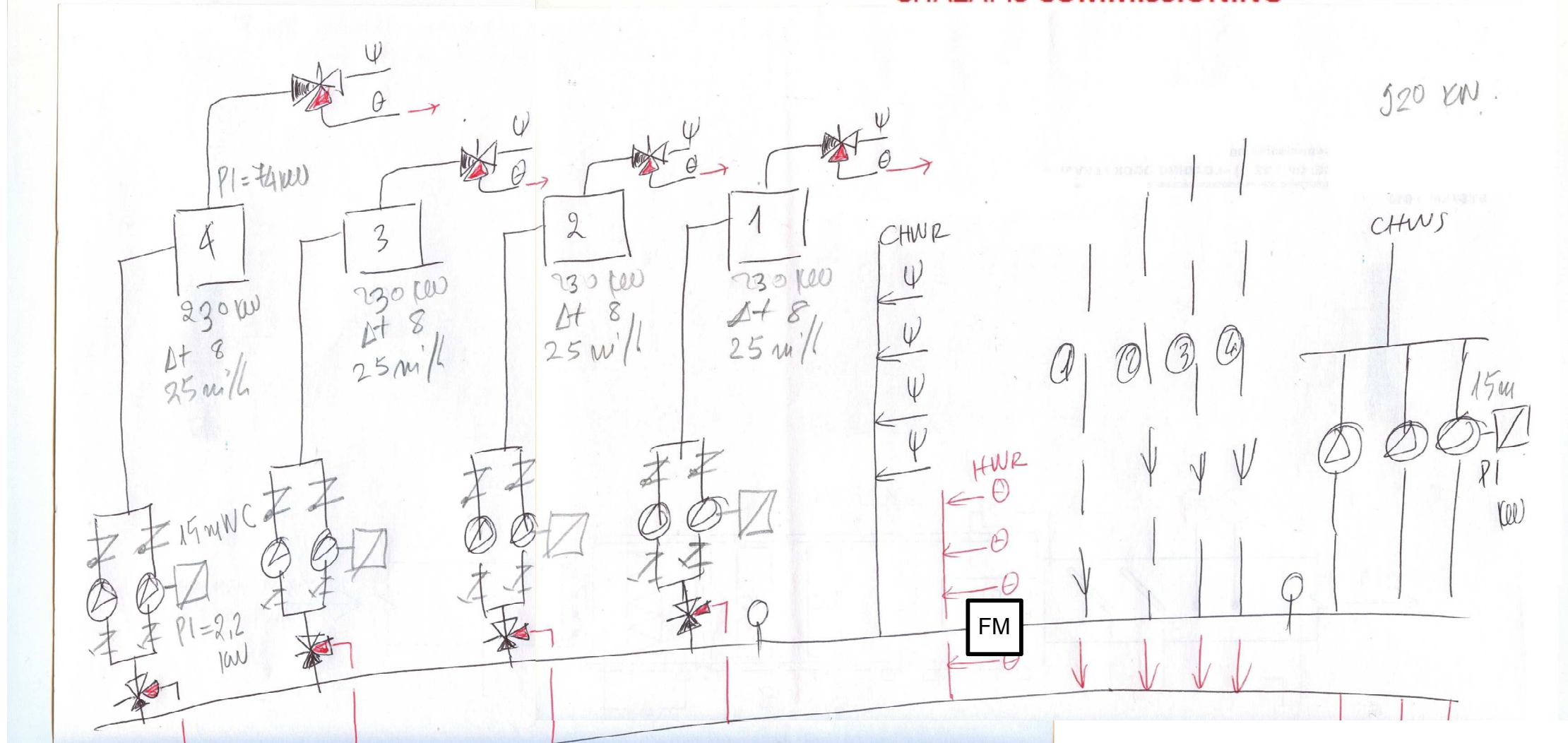


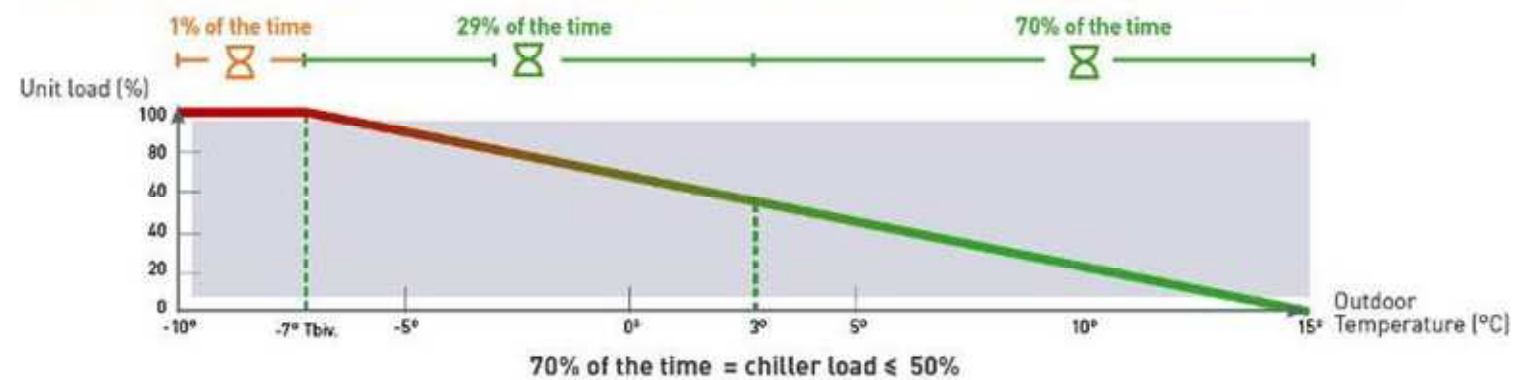
## CHAZAPIS COMMISSIONING



The Plant control system, decides upon the cooling load, to:

1. Divert 3-way valves of every Liquid chiller into cooling mode.
2. Starts the primary double pumps on a soft start
3. Commands the Chiller Heat Pump to start in Cooling Mode.
4. The sequence is from nr one to the nr four, should it required to cover the cooling load profile.
5. The Chillers Add function takes into consideration the deviation from system cooling set point, the dead band and the rate of rise of the chilled water.
6. The Subtract function of Plant Control System takes into consideration the difference in water temperature between cooling supply and cooling return water temperature. As the delta T drops down from nominal and the flow rate in the bypass pipe shows flow equivalent to 110 pct of one chiller running, then commands one chiller to stop.
7. Maximum demand limit: depending on weather data the Plant control system limits the maximum running capacity of the chillers driving them in better EER.

**SCOP** is a new way of measuring the true energy efficiency of heat pumps over an entire year. This new indicator gives a more realistic indication of the real energy efficiency and environmental impact of the heating system.

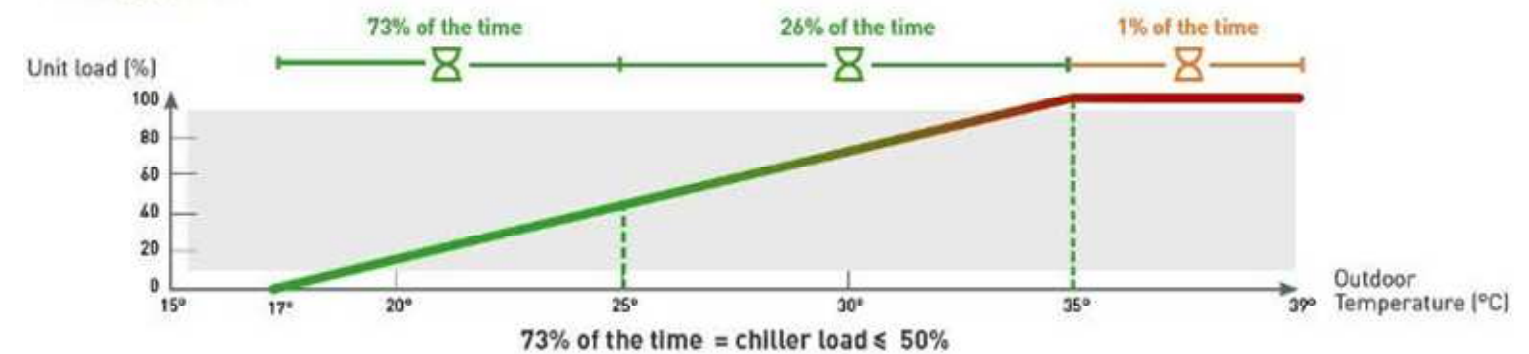


### HEATING WATER PLANT

It is comprised of the same 4 pieces Liquid chillers reversible heat-pumps, in parallel piping connection through the heating Header, the 3-way 2-postion motorized valve (chiller inlet), the double primary pumps and the 3-way 2-postion motorized valve (chiller outlet).

The heating distribution pumps (3 pieces) are parallel and connected with Inverter Drives.

**SEER** is a new way of measuring the true energy efficiency of chillers for comfort cooling over an entire year. This new indicator gives a more realistic indication of the real energy efficiency and environmental impact of a cooling system.



### CHILLED WATER PLANT

It is comprised of 4 pieces Liquid chillers reversible heat-pumps, in parallel piping connection through the Cooling Header, the 3-way 2-postion motorized valve (chiller inlet), the double primary pumps and the 3-way 2-postion motorized valve (chiller outlet).

The chilled distribution pumps (3 pieces) are parallel and connected with Inverter Drives.