

BROCHURE

FLASH COOLER

OPPORTUNITY

It is a cooling **system based on the unique correspondence** between pressure and temperature.

The system is specially constructed to **generate an almost absolute vacuum** in the chambers where the product enters.

Cooling occurs due to evaporation (energy absorption) which is a consequence of the extreme lowering of the boiling point due to the almost absolute vacuum generated by the system.



Boiling generates an evaporation of the free water present and a consequent concentration of the product. This evaporation causes a **'temperature absorption'** and thus the cooling of the product itself.

The Opportunity Flash Cooler is the ideal solution for **instantaneous cooling** of products exiting the concentrator.

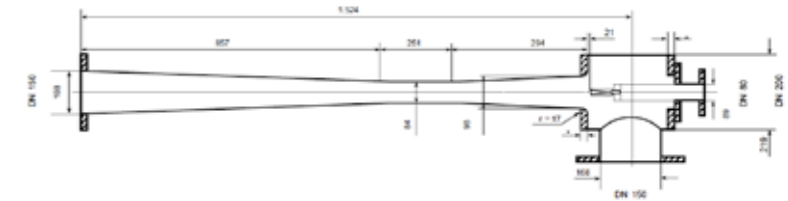
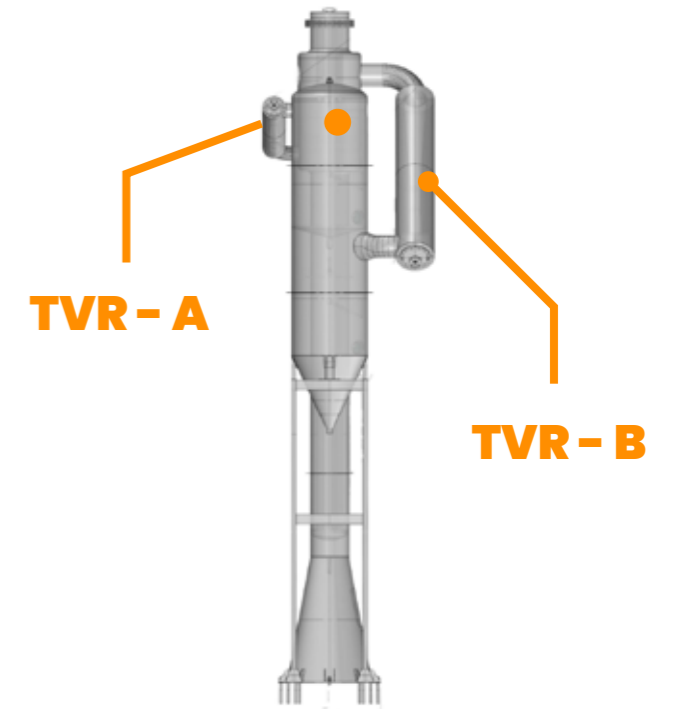
The evaporation/cooling chamber is designed in two stages in order to:

- Improve energy efficiency (steam savings)
- Compensate for the supply inconstancy
- Generate a longer exposure time to low temperatures.

The thermocompression system creates a vacuum inside the two chambers, thus reducing the boiling point of the product.

The thermocompressors mounted in the Opportunity Flash Cooler perform a dual function:

- 1**
MAINTAINING A VACUUM IN THE CHAMBERS
- 2**
STEAM EXTRACTION BY BOILING



An appropriately sized **condenser** will make the evaporated fraction liquid again in the cooling chambers.



The vapours discharged by the thermocompressors are condensed by a flow of water that will carry the thermal energy to a cooling tower for disposal.

The surface condenser makes it possible to reuse water that would otherwise be lost.

OPPORTUNITY
I n g e n i u m C u r a O p e r a