

## Haier repeat order confirms Cannon V.A.I. a preferred method for the production of energy-efficient domestic refrigerators

Haier, a leader in cold appliances, is currently using with success its second 16-fixture Cannon foaming and polymerisation line for domestic refrigerators, featuring the Vacuum-Assisted Injection (V.A.I.) method, in its Qingdao factory. According to Cannon, Haier's repeat purchase of a V.A.I. foaming equipment reinforces the commercial success of this innovative technology, industrially launched in September 2011.

By applying vacuum into the complex mould cavity where a domestic refrigerator is filled with rigid polyurethane, the **V.A.I.** technology facilitates the expansion of the foam into the cabinet, providing substantial benefits that convinced **Haier** to confirm its trust in this solution and repeat its first order, says **Cannon**:

- Increased productivity per foaming station: thanks to the use of highly-reactive formulations that provide a faster demoulding time, a curing cycle of around 180 s is now the reference for a side-by-side model with very thick walls, using the appropriate polyurethane chemical formulation developed by the **Dow Chemical Company** for this technology.
- Optimised distribution of foam throughout the whole cabinet.
- Optimum insulation performances.
- Optimum flow of expanding foam in the cabinet cavity.

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A tight co-operation with Dow allowed for the joint-development of **Pascal** technology, an innovative chemical solution that is said to draw new frontiers in the production of refrigerators. The polyurethane chemistry developed by Dow for this technology reduces the foam thermal conductivity to a new reference level and allows for a significantly shorter polymerisation time, says Cannon.

The first industrial plant working with the Cannon V.A.I. technology, delivered to the Haier Chongqing (China) plant, has been producing its Class A refrigerators since 2011. The second V.A.I. plant of Haier is producing its high-class side-by-side wider models in the Yellow Island, Qingdao, factory, since February 2014.

Two Cannon **A-System** metering units, connected to four **SR24** mixing heads, precisely feed the amount of foam required by each cabinet. Cannon developed a specific polymerisation jig for this technology, in which the refrigerator cabinet is maintained under a controlled degree of vacuum during the whole period of the foam's injection.

A centralised vacuum station provides in each mould the negative pressure required at a very constant level for the whole period of the chemicals' injection and of the foam's expansion. Sixteen curing jigs, aligned in two eight-fixture rows provide an output capacity of four foamed cabinets per minute. A patented solution, this method allows for the production of refrigerators featuring cost-effective eco-design and superior energy saving performances, says Cannon.

### Adresse:

<http://www.gupta-verlag.com/general/news/technology/14766/haier-repeat-order-confirms-cannon-v-a-i-a-preferred-method-for-the-p>