

## Presenting the New Range of FHC Unit Coolers



The new FHC range of cubic commercial unit coolers reflects the continual improvements introduced by the company in recent years. The achieved objective is the production of equipment of first-class technical quality and with high-efficiency heat exchange capability. The units have also been designed with great attention to detail and they keep energy consumption to a minimum.

Most importantly, this range is significantly wide, featuring capacities (at catalogue specifications for 6 mm fin spacing) from 1.6 to 76.2 kW. This has been made possible thanks to the use of no less than 5 fan groups ( $\varnothing$  275, 300, 350, 450, 500 mm), which are the origin of the family groups F27HC, F30HC, F35HC, F45HC and F50HC.

Such a comprehensive range means that all the various application requirements are covered, from small to medium cold rooms for the conservation of fresh and frozen products, or for the freezing of them.

### F27HC – F30HC – F35HC Series

The middle-lower end of the FHC series includes 3 fan groups:  $\varnothing$  275, 300 and 350 mm. While the first and the last constitute a natural evolution of the well-established S2HC and S3HC series, the F30HC models represent important news: they cover the area between the two preceding series, stages of very limited height combined with high capacity and low energy consumption. The table below shows the average relationship between refrigerating capacity (at catalogue specifications) and capacity absorbed by the fans for the three product ranges, referring to 6 mm fin spacings. The great amount of energy savings with the new range are clearly shown.

Range	Ref.cap*/Cap absorbed by fans
F27HC	21.5
F30HC	40.0
F35HC	29.7

\*Ref. cap: Refrigerating capacity

The FHC design activity focused on research into new operating efficiency limits, using detailed fluid dynamic studies. It concentrated above all on the combination of fans with heat exchangers, the shape of which is derived from the experience gained on the current SHC series. Long experimentation in the wind tunnel of the LU-VE laboratories led to the new directional Jetstreamer grill which ensures uniform distribution of the air on the exchanger, greater air quantity, greatly extended use of the fan during the defrost stage and a particularly long air throw.



LU-VE's Jetstreamer grill

LU-VE provides typical fan curves of F30HC and F35HC ranges which use this sophisticated device.

Those illustrations show the air quantity increases compared to a traditional grill by respectively 4% (F35HC) and 9% (F30HC). The new Jetstreamer also enables elevated heat exchange efficiency to be maintained during the defrost stage, as the air quantity remains close to the nominal value even with a significant load of frost on the fins (the curve is decidedly more vertical). Such favourable behaviour has allowed a slight reduction of the fin spacing compared to the current SHC series, thus improving the overall efficiency of the product.

May 25, 2008

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