

First Prize

*Manufacturers of
BEE Star Labeled Appliances
(Refrigerator)*

VIDEOCON INDUSTRIES LIMITED

Gurgaon (Haryana)

Unit Profile of Aurangabad Plant

A dream seen years ago, gripped with great effort and nurtured with innovative ideas is today a reality in the form of a billion dollar global conglomerate - Videocon. Today that name commands the trust of its associates, clients and customers and delights them with its innovative products. Since its conception, Videocon has been writing new success stories thanks to many wise minds and expert hands behind it, and its mission to be seen as the pioneer in creating innovations and elevating lives. This has resulted in it becoming India's largest Consumer Durables Company, with its presence across categories such as TVs, washing machines, AC's, refrigerators, microwave ovens and other home appliances. With 3 global R&D centres, 7 manufacturing units and a proficient force of over 25,000 employees including over 7,000 outside India, Videocon has been introducing technologies and products that are simply unimaginable and unthinkable.

A Videocon industries Ltd. was established in Sept, 1986 and set up a state-of-the art manufacturing facility at Aurangabad, Maharashtra in 1986. This facility manufactured Colour Televisions, Washing Machines, Air-Conditioners and Microwave Ovens. During the year 2001, Videocon also commenced the home production for its eco-friendly Refrigerators and established its Aurangabad manufacturing unit. Covering over 210 acres, the facility manufactures LED, Air Conditioners, Refrigerators, Washing Machines, Microwave Ovens and GSM phones. The Aurangabad manufacturing unit line has been designed with the latest technologies at par with international standards and is one of the Eco-friendly units amongst all videocon manufacturing plants in the world. Videocon is the fastest growing company in the consumer electronics, home appliances industry today. Videocon is continually providing superior technology products & value for money to more than 2.5 Million households in India.

PRODUCT : VIDEOCON'S ENERGY EFFICIENT DC REFRIGERATOR



Energy saving projects implemented

Videocon has been continuously working and implementing the changes in its products for adhering to the norms on part of Energy saving.

Company has invested in new technology and design to improve the Energy Efficiency of Refrigerators in following ways and brought new range of DC refrigerators in the market in the month of Dec 2014.

Following Design changes were implemented in the new Design series:

- 1 Improved gasket design to minimize thermal losses through the door and body contact surface.
2. Increase in foam thickness for better insulation & reduction in loss of energy.
3. New evaporator design.
4. New condenser design.
5. Improved Compressor design.

All the above changes in design helped in enhancement of heat transfer and reduction of energy consumption of DC Refrigerator.

What made this product so efficient

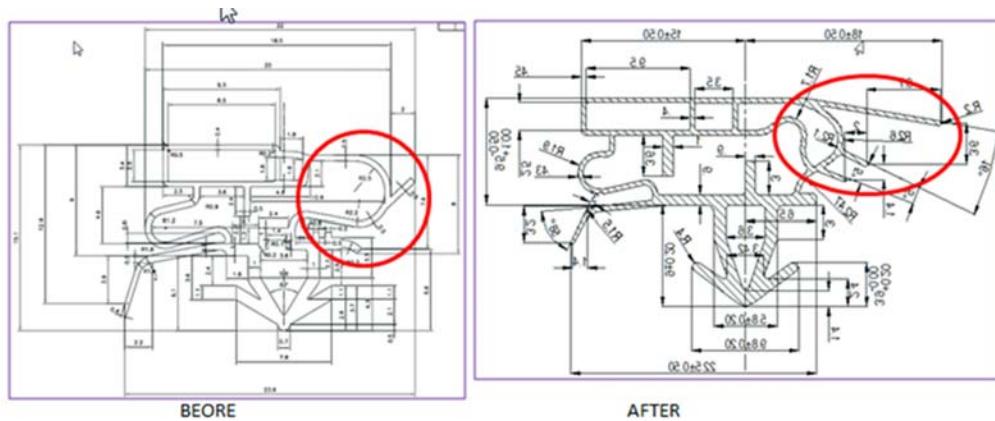
a) Improved Gasket design & Foam Thickness:

Thermal losses through gasket & Less foam thickness causes increase in % working time of compressor which is directly related to increase in energy consumption for same performance output.

In this product

a) **New gasket** design helps in reduction of thermal losses through gasket leakages which directly helps in reduction in % working time of compressor.

b) **foam thickness** is increased by 20 mm at all sides which helps in holding cooling retention for longer time which directly helps in reduction of product heat load and hence reduction in % working time of compressor.



Figures showing Design Improvement done in gasket design.



Figure showing increase in Foam thickness done and table below shows the difference in the foam thickness in old and new design.

Energy Conservation Achievements and their contribution to the overall efficiency market:

Videocon has not only achieved 5 star Energy rating in its new DC refrigerator's but has reduced the energy consumption by 40% than the specified target for 5* in 2014. Since then Videocon is continually producing such energy efficient New Range of DC refrigerators.

Total energy saved is 813647168 kWh/year for overall DC Refrigerator segment.

Videocon will continue to produce and increase the share of such products in this year, for which Videocon is planning to launch Energy Efficient refrigerators in Frost Free segment. This will be a great achievement & contribution from the company for energy conservation to the Indian Market.

Introduction of Innovative and sustainable products in future and their efficiency level:

In future Videocon is planning a) Implementation of **R600a** refrigerant in overall refrigerator to improve energy efficiency level. b) Use of variable speed compressor i.e. **inverter compressor** enhance efficiency level.