



LG's Multi V series first hit the market in 2004 and the current series, Multi V IV, was launched in 2013.

Keeping cool by going 'green'

From solar-powered air conditioning systems to installations capable of meeting the demands of the Middle East's harsh climatic conditions, LG has been continually developing its HVAC offering to suit the unique demands of buildings throughout the region.

“We are jumpstarting our new focus to achieve our ultimate goal of leading the industry with our innovative technology.”

Lee Jae-sung, president of the LG System air conditioning business unit

A CONSTANT STREAM OF high-rise developments, retail outlet projects and the construction of office facilities throughout the arid Middle East over the past two decades has led to a boom within the region's commercial air conditioning (CAC) industry. The region's hot and humid climate means that while these installations are essential, they can prove to be expensive and energy intensive ways of keeping building occupants cool.

LG Electronics, the market leader within the global HVAC solutions market has been looking at ways in which to enhance the industry's business-to-business (B2B) infrastructure by working on developing solutions for the HVAC sector that have a focus on long-term cost-reduction and energy-saving applications.

Announcing plans earlier in the year to shift its focus towards B2B sales, Lee Jae-

sung, president of the LG System air conditioning business unit, remarked, “LG is already a true total HVAC and energy solution provider. But we shouldn't rest on our laurels. That is why we are jumpstarting our new focus, to achieve our ultimate goal of leading the industry with our innovative technology.”

In the Middle East, this commitment has been no less evident than at a number of large commercial and residential projects, such as at Al Khaliji Bank Tower in Doha, Qatar, where the company faced the challenge of isolating different systems in the 70-metre-high tower. The solution was the company's Variable Refrigerant Flow (VRF) systems, which offers energy-efficient solutions that provide flexibility to the operator. LG was the first company in Doha to introduce Variable VRF systems, with the LG Multi V units decided to be the most

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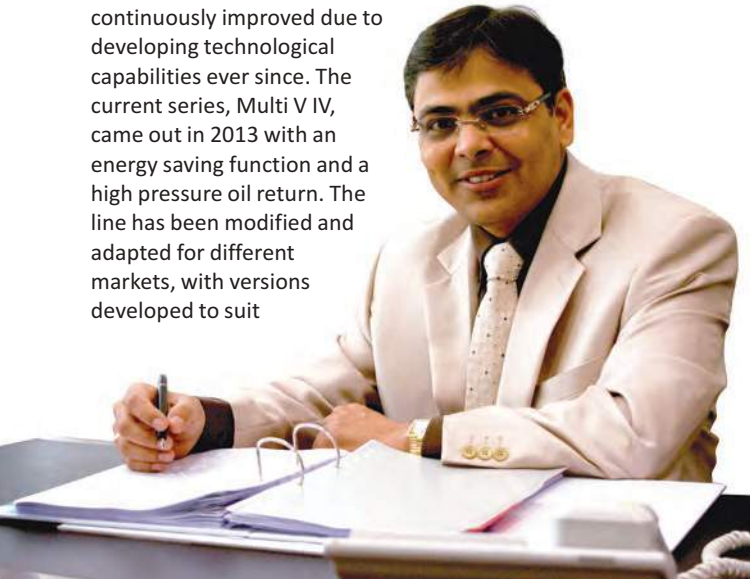
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energy-efficient and convenient to maintain, and more compact compared to the company's chilling system.

It extended the operation range by using a more enhanced inverter compressor known as V-Scroll and control technology, with the V-Scroll inverter compressor proving to be 11 per cent more efficient than a conventional compressor. The Multi V II systems installed at the site comprise 18 outdoor units, as well as 32 indoor units, with a total system capacity of 504kW.

At the Cosmopolitan Hotel in Dubai, the building's operators were looking for a solution that offered energy savings, lower maintenance costs and innovative eco friendliness able to cope with Dubai's extreme weather conditions. LG's solution was to provide energy efficient units within reasonable noise levels and lower total cost of ownership in parallel to the best design solutions, notably the capability to have VRF compressors connected to Air Handling Units (AHU). The LG Multi V 1,678kW-capacity system that was installed provided a flair of style to the hotel and allowed the air conditioning sense, manage and switch to provide comfortable room temperatures during seasonal changes that can reach more than 50°.

The Multi V series, probably the best known of LG's CACs, first hit the market in 2004 and has been continuously improved due to developing technological capabilities ever since. The current series, Multi V IV, came out in 2013 with an energy saving function and a high pressure oil return. The line has been modified and adapted for different markets, with versions developed to suit



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conditions in coastal areas, or adapted to the nuances of a country's power grid in order to reduce installation and maintenance costs.

The version best suited to the desert climates of the Middle East and North Africa region has been adapted to operate at temperatures as high as 54°C.

Along with VRFs, LG's HVAC solutions also include chillers, which are required to support VRFs in large facilities with vast open areas. LG's chillers are extremely popular in power plants, district cooling facilities and commercial buildings throughout the Middle East, while its BECON (Building Energy Control) line provides a solution that operates a building's entire HVAC system.

Changing trends within the HVAC market

The HVAC market in the Middle East has been progressing strongly in recent years, thanks in part to a large number of major project announcements and developments.

Sagar Kulkarni, managing director of Consistent Engineering Consultants, a building services engineering solutions firm based in Dubai, says of the region's commercial air conditioning market, “The whole market is experiencing an uptrend because of the activity that is being planned in the next few years.

“We are preparing for Expo 2020 Dubai, which means the construction market is much more energetic. We are also looking forward to the 2022 World Cup in Qatar, while Saudi Arabia is performing strongly. The construction sector is going well, but apart from that it is also a lot to do with tackling new challenges and sustainable development.

“A lot of retail and hotel projects are expected, so it's a good market for the HVAC industry over the next few years.”

The upturn for the industry is leading to more competition and better solutions – especially when it comes to the sustainability side of things.



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“When we talk about the selection of equipment on big project, we talk about the whole lifecycle cost analysis, which help meet green building regulations like Estidama in Abu Dhabi. We talk about the initial operational cost and maintenance cost, and we have carried out a number of projects with a full lifecycle analysis.”

With many customers now better informed, or at least willing to listen to the argument for installing sustainable HVAC solutions, regulations such as Estidama are leading to a wholesale shift in the HVAC industry.

Dharmesh Sawant, senior manager – B2B AC at LG Electronics Gulf FZE, says that the increasing number of sustainability-driven regulations that are being established throughout the Gulf has been driving the sector towards a one-stop culture of improvised products and installations, with many customers opting to utilise the power of the sun to power their CAC systems.



Dharmesh Sawant, senior manager – B2B AC at LG Electronics Gulf FZE

“A leading trend is for Air-cooled VRF systems,” Sawant notes. “However, there is lot of potential in the Water-cooled VRF system which can be a replacement for Centrifugal Chillers, wherein the customer is looking for independent billing between Tenant and Authorities. Also Water-cooled VRF system consumes much lesser power and lower

connected load making it attractive in long runs.

“Many governments throughout the region have been subsidising the cost of energy, causing a lot of financial pressure, so the motivation for these governments is to reduce the amount of energy they can subsidise, says Sawant. “Utilising solar energy to power CAC systems will mean that these governments will not need to introduce additional taxes, benefiting all stakeholders within the market.”

Exchange of information

Knowledge transfer is a key component of LG’s CAC offering, says Consistent Engineering Consultants’ Sagar Kulkarni, as experts experienced in dealing with the region’s humid and hot conditions share information on the latest developments in CAC technology.

“Sales support is a key aspect of the service, and we’re not just talking about the support, but analysing the data,” he notes.

“We get regular updates from Dharmesh and his team members on how to develop our plans for future installations, and the application of knowledge and keeping the information updated is what, I believe, sets LG’s offering apart from less established CAC companies in the region.”

As the market develops and construction projects throughout the region become even more ambitious, the HVAC market, led by established players such as LG, is continuing to keep pace while aiding and abetting the drive for ecological and environment building solutions. ■

To find out more about LG’s CAC portfolio, please visit: mea.lgeaircon.com






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