

НОВЫЕ РЕШЕНИЯ CARRIER

Мировой лидер в области производства оборудования для систем отопления, вентиляции и кондиционирования воздуха – компания Carrier Corp. в июне представила в Монлюэзе (Франция) холодильные машины Aquasnap(r) 30RB/30RQ (только холод/тепловые насосы) с воздушным охлаждением холодопроизводительностью от 17 до 160 кВт.



30RB/RQS 40-160

От предыдущих моделей они отличаются повышенной энергоэффективностью. Новые машины используют в качестве рабочего вещества озонобезопасный хладагент Puron(r), оснащены графическим пользовательским интерфейсом. В новые холодильные машины внесены серьезные конструктивные изменения, позволяющие повысить энергоэффективность, надежность и удобство монтажа и обслуживания. Усовершенствования основаны на изучении потребностей рынка, а также обязательствах компании Carrier перед своими клиентами.

В 1997 году компания Carrier заняла лидирующую позицию на рынке холодильных машин мощностью менее 200 кВт благодаря запуску новой линейки чиллеров Aquasnap(r) 30RA/RH. Сегодня компания Carrier закрепляет свой успех выпуском нового поколения воздухоохлаждаемых холодильных машин со спиральными компрессорами серии Aquasnap(r) 30RB/RQ (только холод/тепловой насос). Компания Carrier остается лидером в области производства холодильных машин с нулевым воздействием на озоновый слой, применяя в линейке чиллеров Aquasnap(r) 30RB/30RQ хладагент Puron(r). По условиям Eurovent новые холодильные машины относятся к классу А энергоэффективности для моделей от 17 до 33 кВт и классам В и С для агрегатов производительностью от 40 до 160 кВт, что обеспечивает примерно от 17 до 20% экономии потребляемой энергии в сравнении с предыдущим поколением холодильных машин.

«Холодильные машины Aquasnap(r) мощностью от 17 до 160 кВт будут оснащены новым графическим интерфейсом пользователя, который позволяет

отображать рабочие параметры агрегата, включая значение расхода воды, – заявил Антони Орнатски, менеджер компании Carrier по холодильным машинам малой производительности с воздушным охлаждением в странах Европы, Ближнего Востока и Африки. – Интерфейс удобен в работе и может быть установлен удаленно, например в здании».

Новые холодильные машины Aquasnap(r) с воздушным охлаждением предлагают дополнительные инновационные возможности. Установленный на заводе гидравлический модуль обеспечивает быстрый монтаж и облегчает ввод в эксплуатацию. Гидромультипликатор может комплектоваться насосами с переменным расходом хладагента, что позволяет системе автоматически адаптироваться к тепловой нагрузке здания. Компактная конструкция и небольшая ширина зон для сервисного обслуживания позволяют установить Aquasnap(r) практически в любом месте.

«Компания Carrier постоянно изучает потребности рынка по улучшению холодильных машин Aquasnap(r) мощностью ниже 200 кВт, – заявил Дэвид Аппель, президент компании Carrier по системам промышленного кондиционирования зданий



30RB/RQ 17-21

в странах Европы, Ближнего Востока и Африки. – От предыдущего поколения машин мы сохранили такие ключевые характеристики, как компактность, в то же время предложив инновационные решения, которые в полной мере отражают лидирующую роль компании Carrier в проектировании систем отопления, вентиляции и кондиционирования воздуха».

Холодильные машины Aquasnap(r) производятся на двух заводах компании Carrier, расположенных во Франции и Италии, с дистрибуцией по Европе, странам Ближнего Востока и Африки. ■

Компания Carrier Corp., главный офис которой расположен в Фармингтоне (штат Коннектикут), является крупнейшим мировым поставщиком оборудования для систем отопления, вентиляции и кондиционирования воздуха и представлена более чем в 170 странах. Компания Carrier – часть корпорации United Technologies Corp., базирующейся в Хартфорде (штат Коннектикут). Более подробная информация представлена на сайте www.carrier.com.

Корпорация Carrier прочно удерживает мировое лидерство в области производства оборудования для систем отопления, вентиляции и кондиционирования воздуха (HVAC), каждый год инвестируя в технологии, влияющие на комфорт, эффективность и окружающую среду. Сейчас Carrier – это более 33 тыс. сотрудников в 167 странах, 20 научно-исследовательских центров, более 50 заводов по всему миру.

Качество продукции подтверждено:

- ISO 9001 – CE,
- сертификат «Евровента».
- Производство Carrier имеет российские сертификаты.
- Сертификаты ГОСТ-Р включают:
 - гигиенический,
 - на электромагнитную совместимость,
 - по безопасности.



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even 10 people are also available, but this presumes completely different loads on a building, and consequently specific calculations. If there are few machines, they work generally in non-stop mode circulating around the building. Cleanliness of a building in many respects is a matter of culture. If people lease offices or buy apartments for a great deal of money in a prestigious building, they expect windows to be clean, as they cannot do it by themselves. Moreover, the façade must be maintained promptly, without bothering tenants.

How is safety ensured? Is there any automatic machinery which can replace a person?

There are systems, which "creep" all over the building attached by suction caps, but it does not ensure appropriate quality grade. Everywhere in the world such works are implemented manually, even at heights of 800 meters. Workers are specially outfitted, buckled up and so forth. Their safety is provided, first of all, by absolute accurate engineering calculations, which is the basis for production and installation of such equipment. We literally hold the lives of our clients in our hands. Remembering this all the way, we always put safety first. Moreover, this rule covers not just existing equipment, but also each operation or procedure of our work. We are capable to adjust our equipment to basic design, production and installation standards of any country. I participated in test sessions of our systems in the tower of Shanghai World Financial Centre at a height of 492 m over street level, which is why I fully understand the requirements for safety.

What are the peculiarities of BMU designs for complex facades?

The primary task is to ensure access to the most "inconvenient" points of a building. This is achieved by using machines both with fixed-length and telescopic boom, which moves out up to 48 m. To access hard to reach surfaces telescopic cradles with a counterbalance are used, which may approach the façade due to the centre-of-gravity shift. The units may be located either inside the building, then the window opens and the boom is projected; or on the roof. It is possible to design everything, depending on the requirements and financial capacity of a client. CoxGomyl carries out any wishes, but at the same time proposes its own solutions, which are, as a rule, more rational and, therefore, feasible.

What are the basic stages of your work process?

These are: design, production, installation and maintenance. Work begins when the design documentation of a building is available and a general contractor, who selects subcontractors, is specified. After

examining drawings, we present our proposals with an estimated number of units, their location, productivity, preliminary loads, kinematics and so forth. If our proposals are accepted, equipment is mated with the specific building data in more detail so that there would be no issues. At the moment of a unit's approval all questions concerning loads, arrangement of parking lots and so forth are settled. When a machine is produced and thoroughly tested in the workshop, it is dismantled, delivered to the site, mounted and enabled.

What problems do you come across in processing an order?

It takes a certain amount of time to acquire materials, to plan production and deliver equipment, but builders often change schedules, whilst design organizations detain drawings approval, and we cannot yet start fabrication of a machine. When a unit is produced and delivered, it turns out that builders already completed the floor specified for the unit, and we have to work on the planned placement. That is why, in my view, the major managerial problems are harmonization and coordination of work with other contractors, which takes time, especially in Russia. The building process is a kind of magic, but we try to seek to compromises. At the same time CoxGomyl believes that there are no problems which may influence quality of supplied materials and production performance. There were cases where we had to remodel the work of a contractor, because it might have affected the reliability of our systems. The company carried out this work at its own expense - safety and reputation is more important than money.

CoxGomyl was formed and incorporated in 2008 by the merger of E.W. Cox, Cradle Runways and Gomyl s.a. But Cox was formed much earlier - in 1953, when E.W. Cox was a pioneer of external building access systems in Australia. E.W. Cox is an engineering company specializing in the design, manufacture and installation of Building Maintenance Equipment (BME) and Access Equipment. E.W. Cox's design and manufacturing base is located in Victoria, Australia. E.W. Cox specializes in providing solutions to the world's tallest and the most complex buildings including Taipei 101, Shanghai World Finance Centre and the 818 meter tall Burj Dubai. Gomyl, s.a. was established in 1989 by a team of specialists in the field of engineering. Their main objective is to design, manufacture, commercialise and distribute cleaning and maintenance equipment for high-rise, multi-storey building facades. Cradle Runways was founded more

than 50 years ago in Brockley, UK specializing in customized façade access equipment for tall structures.

Today CoxGomyl is the world's leading provider of Building Maintenance Units. Its offices are located in Melbourne, Sydney and Queensland (Australia), Madrid (Spain), London (UK), Shanghai, Hong Kong and Macao (China), Dubai (UAE), Doha (Qatar), New York (USA), Moscow (Russia) and Singapore (SE Asia). Designing and manufacturing of integrated building systems are being carried out in four locations: Melbourne, Madrid, London and Dubai. Melbourne capacities are oriented towards production of integrated building systems for façades of complex configuration; Madrid factory produces regular equipment for low- and mid-rise buildings with ordinary façades; London and Dubai fabrication facilities generally operate in local markets. The company employs approximately 500 staff, including offices and trade missions across the globe.

BMU's are designed as a part of a building in line with world safety standards. These roof-based devices may be fixed or mobile using special guides or railways, or even without any complementary facilities. The systems are equipped with easy-to-handle cradles controlled from a cradle itself or from a machine.

VERTICAL TRANSPORT KONE Eco-efficient (p. 108-109) INFORMATION PROVIDED BY KONE

Sustainable technologies for contemporary city

Growth rates of modern cities are positively striking. More and more companies are craving for offices within bustling hearts of business life, brand new office and residential buildings are being erected not just in outskirts, but also even in already densely developed city centres. Exactly under such conditions the energy-saving solutions are becoming urgent the most, because their application allows to make new or old house environment-friendly, and also decreases dependence of lift equipment on municipal power supply, as a result, it reduces expenditures for building maintenance.

KONE, which has been manufacturing lift equipment since 1910, have been trying hard to develop sustainable technologies, which ensure further perfection of solutions combining innovations, usability, comfort, and also environmental safety even here and now. This particular series

characterized by implementation of such solutions and technologies is called KONE Eco-efficient. Thanks to employment of state-of-art technologies KONE Eco-efficient elevators and escalators help many companies worldwide to reduce costs for equipment maintenance, and furthermore, to meet the most exacting ecological requirements. The pilot and vanguard KONE technology, which relates to KONE Eco-efficient product line was KONE EcoDisk, implemented in elevator equipment still in 1996. Because of this technology the hoist of elevator became direct-driven, which made it possible to eliminate the need for engine lubrication, and the key point is reduction of elevator's energy consumption by 25%! Now, there is no need for machine room - all necessary motion mechanisms are arranged directly in elevator shaft, ensuring space saving. Along with it KONE EcoDisk drive load capacity is by no means inferior to cable and hydraulic drives and it is capable of moving the car at 1m/s speed.

For the passed years the KONE specialists enhanced existing technologies and developed a number of novelties. Thus, majority of KONE elevators is supplied with built-in power generators, which transform potential energy of descending car into useful electricity, which can be utilized for heating, illumination or other needs. Regular elevators simply lose energy while descending, whereas this potential may be usable, which increases efficiency of the system. On average such a system is able to compensate by 25% of energy spent on ascending, and consequently with correct operation it is equivalent to reduction of power bills for elevator equipment by one fourth!

Another effective energy-saving technology is switching of elevator or escalator into standby mode. According to some estimations, turned off light and ventilation in lift car, and also stoppage of escalators in absence of passengers promise decrease of energy consumption by 30%. The only thing to do is to implement rational hoist equipment management system, and KONE specialists willingly undertake this task.

In addition, it worth noting that all contemporary KONE elevators are equipped with LED lamps, which consume by 80% less power than ordinary halogen lights used in the majority of elevators. Taking into account that by 35% of power, spent on elevator operation is illumination cost. Savings on this item may become positively solid comprising up to 560 kW per year for each car.

Well, and the ultimate pattern of hi-end eco-efficiency are sun-powered elevators. Contemporary solar batteries are capable of providing elevator with power pretty sufficient for operation by transform-

ing of luminous energy into usable electricity, regardless of weather conditions. Thus, the item dealing with the daytime operation cycle of elevator equipment might be completely deleted from power bills!

However, besides direct savings of electric power KONE offer a number of enhancements increasing effectiveness of lift equipment along with more sustainability. Within KONE Care for Life service program the company's personnel carry out thorough maintenance check evaluating probability of installation, and reliability, external appearance and operating conditions of equipment. On the basis of obtained data updating of system, which affects only most important components, is being proposed to minimize the budget of updating and to maximize its benefits.

However, with overall updating of lift equipment the owners of buildings obtain additional benefit, and payback takes just few years of operation. In particular, application of KONE MaxiSpace solution provides more spacious car without expansion of elevator shaft, whilst KONE EcoMod solution offers reduction of elevator's power input by 50-70% and oil consumption for drive lubrication may also become by 60% less. All this increases the effectiveness of hoist making it more environment-friendly and helps to get maintenance savings.

KONE elevators are characterized by thought-out design supported by complete warranty assuming regular monitoring of elevator's operability. Due to application of the state-of-art technologies KONE professionals managed to achieve minimum depreciation of engine's working components. This reduces routine maintenance and, as a result, it almost eliminates idling of elevator. Thus, KONE solutions are not just from among the most valid, but this stuff is also distinguished in terms of maintenance costs, reliability and eco-efficiency. Besides exclusive interior design opportunities and intellectual elevator management systems encompassing a group of hoists these advantages make KONE products both most comfortable for users and convenient for building owners.

CONDITIONING The New Solutions by Carrier (p. 110-111)

The global leader in heating, ventilation and air conditioning systems manufacturing, the Carrier Corp., presented this June in Montluel (France) the Aquasnap (R) of 30RB/30RQ air-cooled refrigerators (only cold/

heat pumps) with refrigerating capacity from 17 to 160 kW.

This series is different from previous models in terms of increased energy-effectiveness. These new machines utilize as working medium the ozone-friendly Puron (R) refrigerant and are equipped with graphic user interface. The new refrigerators bear some fundamental design novelties, which make it possible to increase energy-effectiveness, reliability and convenience in terms of installation and maintenance. Improvements are based on marketing studies, and also client-oriented commitment of the company.

In 1997 the Carrier won leading refrigerator market position dealing with devices, which output exceeds 200 kW thanks to launching of new product line of Aquasnap (R) 30RA/RN chillers. Today the company consolidates its success with production of the new generation of the air-cooled spiral compressor refrigerators of Aquasnap (R) 30RV/RQ series (only cold/heat pump). The Carrier is still the leader in producing of refrigerators with zero impact on ozone layer, using throughout the product line of Aquasnap (R) 30RB/30RQ chillers the Puron (R)refrigerant. According to Eurovent requirements, new refrigerators relate to the Class A of energy-effectiveness for models from 17 to 33 kW and Classes B and C for aggregates of 40-160 kW output, which ensures approximately 17-20% saving of energy input in comparison with the previous generation of refrigerators.

"The Aquasnap (R) refrigerators with output from 17 to 160 kW will be equipped with new graphic user interface, that makes it possible to display operational characteristics of an aggregate, including the value of water flow rate", - states Anthony Ornaty, the Carrier's low-capacity air-cooled refrigerating unit manager of Europe, Middle East and Africa. "The interface is well handy and may be installed remotely, for example, in a building".

The new Aquasnap (R) air-cooled refrigerators offer additional innovative options. The factory installed hydraulic module ensures rapid installation and facilitates breaking-in procedures. The hydromodule can be equipped with variable refrigerant consumption pumps, which allows to adapt the system automatically to heat load of a building. Compact construction and comparatively small width of maintenance zones make it possible to establish Aquasnap (R) practically anywhere.

"The Carrier company is permanently monitoring the market in terms of enhancement of Aquasnap (R) refrigerators with output less than 200 kW", - stated David Appell, the Carrier's Europe, Middle East and Africa industrial conditioning President. "The new generation retain such key char-

acteristics as compactness, offering at the same time some innovative solutions, which positively reflect the leading role of Carrier in designing of heating, ventilation and air conditioning systems". The Aquasnap (R) refrigerators are produced at two Carrier manufacturers located in France and Italy, with distribution throughout Europe, Middle East and Africa.

The Carrier Corp., which headquarters is located in Farmington, Conn., provides equipment for heating and air conditioning on the global scale and it is represented in more than 170 countries. The Carrier is a part of the Hartford-based United Technologies Corp. Detailed corporate info is available at www.carrier.com. The corporation firmly retains the world leadership in provision of equipment for heating, ventilation and air conditioning systems (HVAC), each year investing into technologies, which enhance comfort, effectiveness and environment. Now the Carrier's headcount is more than 33 thousand of colleagues in 167 countries, 20 scientific research centres, more than 50 plants worldwide.

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