The recent emergence of energy-efficient building designs has been a major factor in helping to reduce CO₂ emissions, resulting in substantial progress in the fight against energy inefficiency within the home and workplace. The trend towards building designs that are increasingly airtight will certainly help reduce energy usage but is potentially leading to problems for our health and well-being, caused by inadequate ventilation systems.

“The need for clean, healthy air within the indoor environment has never been greater, and even more so now since the eruption of COVID-19, with people more conscious of the quality of the air they breathe. We continue to see the prevalence of damp and moldy living and working conditions within airtight buildings with inadequate heating, ventilation and air-conditioning (HVAC) systems that do not sufficiently deal with airborne contaminants and pollutants. Building features need to demonstrate positive benefits on workers’ health, productivity and morale, whilst continuing to harness sustainable, energy-efficient HVAC systems.

The demand for improved air quality, as well as tightening legislation and more stringent air-quality standards, has led HVAC manufacturers to respond with a range of innovative, technological solutions. Some are seeking out merger partners, through cross-border alliances, to address these technological challenges.

In this Spot On we explore the ways in which modern HVAC systems and technology can contribute to improving health and well-being through indoor living and working environments that promote wellness and vitality.”

PHILIP BARKER
HVAC SPECIALIST, OAKLINS
LONDON, UK
INDOOR AIR QUALITY

An average person breathes in 14 kg of air per day, whereas we only consume 1.5 kg of food and water daily, and so the quality of the air we breathe is clearly very important. People in developed countries spend approximately 90% of their time indoors, and most of the world’s population lives in urban areas and works in an office environment, where the concentrations of some air pollutants are often two to five times higher than typical outdoor concentrations. The increased prevalence of synthetic building materials, air cleaners and other toxic chemicals within more sealed building spaces is likely to increase the concentration of pollutants, such as carbon monoxide, carbon dioxide and volatile organic compounds (VOCs) at home and in the workplace.

Further, within the public eye, COVID-19 has become an increasingly threatening and disruptive pandemic. The World Health Organization (WHO) has determined that viruses of this nature are spread largely through droplets on surfaces and aerosol transmission. Research into historic acute respiratory cases found that when air exchange rates were increased above industry minimum there was a 50% reduction in the relative risk of transmission. The recent outbreak highlights the vital necessity for continued research in this important area of ventilation and the need to capitalize on HVAC engineering in order to fight future viruses.

Source: The Copernicus Programme, US Environmental Protection Agency, Financial Times

Source: BASF Catalysts

Market trends
HUMIDITY CONTROL

In addition to airborne contaminants, the management of moisture within the internal environment is also of growing importance. This removes excess condensation in order to prevent the buildup of mold and, ultimately, maintain optimal humidity levels. A range of sources can generate excess moisture, such as cooking, washing, drying clothes inside and even breathing, with a person exhaling on average 300 ml of water vapor per day whilst awake. Approximately a third of people in the UK report having mold in their homes, and the WHO has indicated that 30% of buildings are linked to sick building syndrome due to insufficient engineering solutions.

Experts have commented on the importance of optimal humidity levels at approximately 40-60% to reduce the spread of disease. COVID-19, for example, is spread through people coughing and sneezing. At higher humidity levels, droplets become heavier and fall to the surface, where they are easier to control and sterilize. In addition, dry air is linked with irritating the membranes in people’s upper respiratory systems that trap harmful particles, making them more susceptible to infection.

HVAC technology is designed to remove moisture but can also create damp conditions from the collection of microorganisms and polluted condensates from air-conditioning units if these are not treated adequately. Market players such as Aspen Pumps have developed specialist low-energy and low-carbon pumps that are used to remove condensate water from air-conditioning systems in a range of environments to maintain a healthy environment. The Max Hi-Flow product is a high-performance pump used commonly in hospital environments in order to meet the critical requirements for ventilating and conditioning hospital air. It is required to operate effectively 24 hours a day, seven days a week, for the purposes of cleansing the air-conditioning systems of the accumulation of bacteria and condensate in order to maintain a sterile and clean environment for hospital patients and staff.

Source: Basic Physiology, US Environmental Protection Agency, Aspen Pumps
THERMAL COMFORT

Thermal comfort covers the levels of air temperature, radiant temperature, humidity and air speed. This, of course, differs depending on the environment and the nature of the work carried out in it. A building’s level of thermal comfort is also an increasingly important consideration, due to the direct link with morale and work performance, and is impacted by increasingly insular and airtight buildings and rising temperatures from climate change, as well as the increased use of electronic devices in the home and workplace. Efficient heat management through HVAC devices will mean staff feel physically comfortable and so productivity, morale and efficiency will not be impeded due to being too hot or too cold. For example:

- Employees may choose not to wear personal protective equipment in dangerous environments that are often naturally hot, increasing the risks.
- An employee’s attention span when concentrating on a given task may subside due to fatigue and discomfort, increasing the risk of errors.
- People may take shortcuts to get out of hot or cold environments.

These are common, everyday risks that arise as a result of suboptimal thermal comfort in a range of different workplace environments. They can result in a significant increase in costs to employers, which can be addressed by effective HVAC solutions.

UK-based Airedale International is one of the leading innovators in the market for developing precision air-conditioning and cooling solutions for a range of workspace environments, including laboratories, manufacturing facilities and nuclear power plants. In designing cooling solutions for customers that operate in demanding environments, Airedale utilizes state-of-the-art analytics, known as Airedale Computational Fluid Dynamics (AFD). Using simulations, these analytics identify thermal issues that may arise in an environment. This aids the development of the design and implementation of cooling solutions, to ensure temperature distribution for the environment is optimal.
Selected public company valuation trends

**EMEA HISTORIC MULTIPLES**

![Chart showing Median EV/revenue multiple and Median EV/EBITDA multiple for EMEA from 31-Mar-15 to 30-Mar-20]

**AMERICAS HISTORIC MULTIPLES**

![Chart showing Median EV/revenue multiple and Median EV/EBITDA multiple for Americas from 31-Mar-15 to 30-Mar-20]

Source: Mergermarket
Selected public company valuation trends

**ASIA-PACIFIC HISTORIC MULTIPLES**

![Graph showing median EV/revenue and EV/EBITDA multiples for Asia-Pacific from 31-Mar-15 to 30-Mar-20.](image)

- **Median EV/revenue multiple**
- **Median EV/EBITDA multiple**

*Source: Mergermarket*

**GLOBAL HISTORIC MULTIPLES**

![Graph showing median EV/revenue and EV/EBITDA multiples for Global from 31-Mar-15 to 30-Mar-20.](image)

- **Median EV/revenue multiple**
- **Median EV/EBITDA multiple**

*Source: Mergermarket*
Recent M&A activity

Oaklins has identified several transactions in the global HVAC sector that completed in Q4 2019 and Q1 2020. The period showed strong activity, particularly in cross-border M&A. This demonstrates how larger players are increasingly focused on broadening their global footprint by gaining access to new technologies and markets through acquisitions.

1. HEATING/REFRIGERATION
   - In March 2020, Waterkotte GmbH, a German manufacturer of heat pumps, was acquired by NIBE Industrier AB, a Swedish manufacturer of heating components for industrial and home applications, for an undisclosed value.
   - In February 2020, Supra S.A., a French manufacturer of household heating equipment, was acquired by Electrodomesticos Taurus S.L., a Spanish manufacturer of electrical household appliances, for an undisclosed value.
   - In February 2020, Enex S.r.l. SU, an Italian designer and manufacturer of refrigeration systems using natural fluids, was acquired by Roen Est Group, an Italian manufacturer of heat exchanger and ventilation devices.
   - In March 2020, Dolby Cleats Limited, a UK-based manufacturer of ductwork components for air control systems, was acquired by Chiltern Capital, a UK-based private equity firm, for an undisclosed value.
   - In March 2020, Swegon Group AB, a Swedish manufacturer of ventilation and indoor climate products, acquired Waterloo Air Products, a UK-based manufacturer of grilles and diffusers, for an undisclosed value.
   - In December 2019, Inflexion, a UK-based private equity investor, acquired Aspen Pumps, a UK-based manufacturer of high-performance condensate pumps, in a tertiary management buy-out from 3i, a UK-based private equity investor, for US$515 million. Inflexion completed the initial buy-out in 2007.

2. VENTILATION
   - In March 2020, it was announced that Kingspan Group, an Irish global building materials manufacturer, will acquire Colt Group Limited, a UK-based provider of smoke control and ventilation products, for an undisclosed value.
   - In March 2020, FEL Group Limited, a provider of data-room cooling solutions, was acquired by the management team for an undisclosed value.
   - In January 2020, The Airedale Group, a UK-based manufacturer of ventilation and conditioning equipment and components used in commercial kitchens, acquired Flowrite Services Ltd., a UK-based company engaged in the servicing, maintenance and installation of commercial and retail air-conditioning and refrigeration equipment, from Foresight Group, a private equity investor, for an undisclosed value.
   - In February 2020, Nathan Holding B.V., a Dutch distributor of heating and cooling products, was acquired by NIBE Industrier AB, a Swedish company engaged in the provision of heating components and solutions for both industrial and home users, for an undisclosed value.
   - In January 2020, CD Sud, a French distributor of heating and air-conditioning equipment, was acquired by iXO, a French private equity firm, for an undisclosed value.
   - In January 2020, Newbury Investments, a UK-based investment company, acquired Primaflow F&P, a UK-based heating and plumbing equipment distributor, from Travis Perkins plc for an undisclosed value.

3. CONDITIONING
   - In March 2020, Inflexion, a UK-based private equity investor, acquired Aspen Pumps, a UK-based manufacturer of high-performance condensate pumps, in a tertiary management buy-out from 3i, a UK-based private equity investor, for US$515 million. Inflexion completed the initial buy-out in 2007.

4. HVAC DISTRIBUTION AND SERVICES
   - In February 2020, Nathan Holding B.V., a Dutch distributor of heating and cooling products, was acquired by NIBE Industrier AB, a Swedish company engaged in the provision of heating components and solutions for both industrial and home users, for an undisclosed value.
   - In January 2020, CD Sud, a French distributor of heating and air-conditioning equipment, was acquired by iXO, a French private equity firm, for an undisclosed value.
   - In January 2020, Newbury Investments, a UK-based investment company, acquired Primaflow F&P, a UK-based heating and plumbing equipment distributor, from Travis Perkins plc for an undisclosed value.
NUAIRE IS A WORLD LEADER IN THE VENTILATION MARKET. OAKLINS’ ASSOCIATION WITH THE COMPANY BEGAN WHEN OUR HVAC SPECIALIST, PHILIP BARKER, ACTED FOR THE MOSS FAMILY ON THE SALE TO ECI PARTNERS. HERE WE PROVIDE AN OVERVIEW OF NUAIRE’S RECENT HISTORY AND HOW CURRENT OWNER POLYPIPE IS SUPPORTING THE COMPANY.

Overview

Established in 1966, Nuaire is a leading manufacturer of high-performance fans and ventilation systems, supplying products to a range of customers in the commercial, residential and industrial end markets. Primary end customers include offices, hospitals, schools and hotels. However, the company’s product range covers the whole spectrum of ventilation requirements across most sectors, offering 40,000 product lines to 40 countries worldwide. Nuaire’s highly efficient fans are engineered to provide adequate fresh airflow that provides clean and comfortable working and living environments for building occupants. Nuaire operates with a commitment to investing in UK manufacturing, innovation and developing its ventilation industry knowledge. The company received financial and commercial support from multiple private equity investments before being sold to Polypipe Group plc in 2015.

Nuaire’s founder Brian Moss sold the business he set up in 1960 to ECI Partners LLP in a management buy-out during March 2004 for US$49 million, when the business was generating revenues of US$45 million. Whilst at Oaklins Cavendish, Philip advised on the sale of the business to ECI. ECI Partners held the investment for three years and during ECI’s ownership, Nuaire achieved substantial organic growth from significant investment in R&D and product development, enabling the business to launch new, innovative products. With ECI’s support, Nuaire’s ongoing focus on innovation in developing greener, more efficient systems enabled the business to capitalize on the increasingly stringent environmental building regulations introduced during this period.
In April 2007, Epiris LLP completed the secondary management buy-out from ECI for US$103 million. Nuaire successfully scaled up and grew organically through further investment in the development of improved engineering capabilities across its broad ventilation product range. Such investments enabled Nuaire to strengthen its diverse offering across all sectors, most notably in the residential market. As a result, Nuaire increased its income by 80%, and profits by 120%, over the ownership period.

In August 2015, UK-based building products manufacturer Polypipe acquired the business for US$187 million. Nuaire was well positioned to add significant value to the existing Polypipe model. It enabled Polypipe to add a new commercial ventilation capability to its operations and diversify its product offering into controls, ducting and accessories. This, combined with existing ducting systems, created considerable opportunities from product synergies, such as sharing of expertise and combined product offers for customers. In addition, the acquisition enabled Nuaire to expand its market reach into high-growth HVAC products, where demand is largely driven by increasingly stringent environmental legislation.

Polypipe continues to support Nuaire in developing superior ventilation systems for the whole spectrum of sectors, in order to consistently outperform alternatives by creating clean environments that are also highly energy efficient. An example is the Noxmaster, introduced in 2018. The Noxmaster whole-house ventilation system combines a powerful carbon filter and a positive input ventilation system. Extensive tests showed that it removes up to 99.5% of nitrogen dioxide (NO₂) and other harmful pollutants generated by traffic emissions and industrial processes. Compared with alternatives, this system offers a significant step forward in reducing occupant indoor exposure to potentially damaging NO₂ pollutants.

Source: Polypipe
Deep local roots, global commitment

Oaklins brings you opportunities from across the world and we meet you with our expertise wherever you are.

OAKLINS OFFERS A COMPREHENSIVE RANGE OF SERVICES

- M&A advisory (buy-side and sell-side)
- Growth equity and equity capital markets advisory
- Debt advisory
- Corporate finance services

HVAC is one of our focus areas. Combining comprehensive sector knowledge with global execution has led Oaklins to become one of the most experienced M&A advisors in the HVAC sector, with a large network of relevant market players worldwide. This results in the best possible merger, acquisition and divestment opportunities for HVAC companies.

If mergers, acquisitions, or divestitures of businesses or business units are part of your strategy, we would welcome the opportunity to exchange ideas with you.

PHILIP BARKER
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Philip leads Oaklins’ HVAC team and is a director of mergers & acquisitions and head of industrials at Oaklins Smith & Williamson, one of Oaklins’ member firms in the UK. Previously, he spent 20 years as head of industrials at Oaklins Cavendish. Philip has completed over 15 sales in the HVAC sector, including assisting Oaklins Sweden on the sale of VoltAir Systems, air handling units for heat recovery in buildings, to Volution; the sale of Energy Technique, fan coils and commercial heating products, to Volution; the sale of Greenwood Air Management, ventilation and extractor fans, to Zehnder; the sale of Lexolux, solar shading screens, to Alumasc; working with Oaklins Denmark to sell York Novenco, HVAC+R systems for marine and offshore, to Dania Capital; and the sale of Nuaire, fans and ventilation systems, to ECI Private Equity.

Oaklins is the world’s most experienced mid-market M&A advisor, with over 850 professionals globally and dedicated industry teams in more than 45 countries. We have closed 1,700 transactions in the past five years.