

brought to you by *Aliaxis*

BEHIND THE SCENES SOLUTIONS IN HEALTHCARE

DISCOVER HOW PLUMBING AND SANITARY
SOLUTIONS ARE MAKING ALL THE DIFFERENCE TO
THE REGION'S HEALTHCARE INDUSTRY.

MAKING HOSPITALS HEALTHIER

HOW HOSPITAL HYGIENE
& COMFORT MAKE ALL
THE DIFFERENCE

BEHIND THE SCENES

WHY RELIABILITY
IS INVISIBLE YET
INVALUABLE TO THE
HEALTHCARE SECTOR

PUTTING QUALITY FIRST

INSIDER INSIGHTS
INTO HEALTHCARE
CONSTRUCTION

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BEHIND THE SCENES

WHY RELIABILITY IS INVISIBLE YET INVALUABLE TO THE HEALTH CARE SECTOR

RELIABILITY IS SOMETHING WE DON'T IMMEDIATELY NOTICE. WHEN IT'S PRESENT, EVERYTHING RUNS SMOOTHLY. IT'S THEN THAT WE BEGIN TO TAKE IT FOR GRANTED OR EVEN FORGET ITS INVISIBLE PRESENCE BEHIND THE SCENES. BUT WHEN IT'S ABSENT, IT'S THEN THAT THINGS START TO GO REALLY WRONG. NOT ONLY IN TERMS OF DISRUPTION TO OPERATIONS, BUT ALSO IN TERMS OF COSTS AND SAFETY. WHEN IT COMES TO HOSPITALS, RELIABILITY IS A FRIEND YOU JUST CANNOT AFFORD TO OVERLOOK.

The GCC healthcare sector continues to grow at a steady pace. Driven by growing populations, increasing life expectancies and the rising prevalence of lifestyle diseases, countries across the region are making concerted efforts to ensure that medical facilities are world-class. Latest figures suggest that the GCC population is projected to grow at a compound annual growth rate (CAGR) of 2.3% to reach 61.6 million in 2022 compared to 55.1 million in 2017 (2018: Alpen Capital). To meet this

demand healthcare facility development in the GCC is high on the agenda.

There are currently about 709 healthcare construction projects with a combined estimated value of \$65 billion, out of which 133 healthcare projects are each worth over \$100 million (Source: According to the BNC Project Intelligence Database). The UAE has the second highest number of healthcare projects in the region at 17%. The combined estimated value of healthcare

projects between Saudi Arabia and the UAE is \$40.6 billion, and they account for over 60% of total value of all healthcare projects. Kuwait is also involved in a number of key mega projects which in terms of expenditure account for 11% of the healthcare sector projects. Significant projects include Salam and Al Amiri Hospital (case study page 26) which exemplify a GCC trend to draw on global experts such as Aliaxis Group to ensure state-of-the-art results.

When we think of state-of-the-art hospitals, we think of the most visible things like calibre of medical staff, advanced equipment, together with cutting-edge design and architecture. Sometimes we overlook the invisible, yet critical elements such as efficient and safe plumbing and sanitary solutions.

THE UNSEEN, UNHEARD THINGS MAKE THE DIFFERENCE

As the region's healthcare sector grows to meet the needs of the population, some considerations should not be taken lightly. Hospitals have unique functions that are



different to any other build. Many, if not all, of the typical hospital building MEP systems are required to operate 24/7 throughout the year. In most regular builds, MEP accounts for about 30-35% of total building costs, while in the more demanding hospital environment, it accounts for significantly more. This is because it is the unseen, unheard elements that make the difference.

Take burst and leaking pipes deep within in the walls of the facility. It might come as a surprise, but water damage is one of the most common mishaps in the healthcare industry. This can result in damage to critical electronic diagnostic and treatment machines such as MRIs, accelerators, simulators and cardiac monitors. Patient services can be delayed, theatres can be severely if not catastrophically disrupted. This chaos not only affects revenues, but most importantly, the health and safety of patients, visitors and staff.

In hospital environments it is critical to ensure the use of high quality products that are renowned for reliability and durability. Consistency in product specification is also key to selecting hospital fixtures. When you consider that plumbing accounts for about 1.3% of total building costs, it makes good sense to invest just a small amount more for globally tried and tested products.

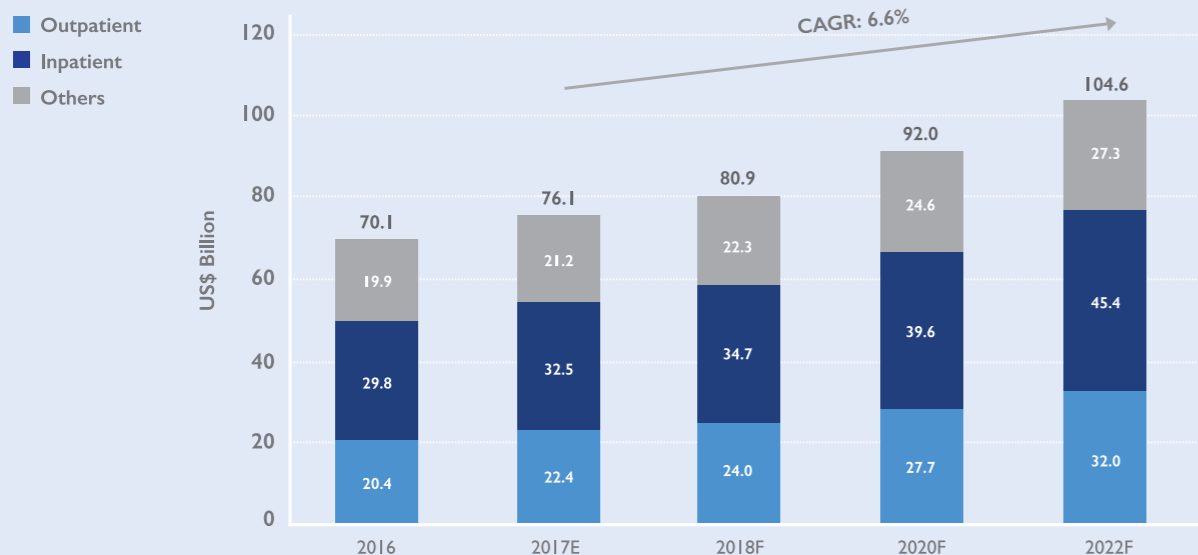
FINDING THE RELIABLE PARTNER TO AVOID DISASTER

Why wait for a disaster to happen? Incidents can be avoided from the outset by turning to experts with high quality, reliable products. This is why so many GCC healthcare facilities are turning to Aliaxis as the reliable one-stop solution provider for plumbing and sanitary solutions.

Aliaxis has the distinct advantage of being a proven supplier to the healthcare sector around the globe for many decades and this gives peace of mind that a long and lasting relationship can be forged with an industry expert. The Group's global reach extends to over 45 countries with 100 manufacturing and commercial entities and over 16,000 committed employees play a role in ensuring an unrivalled reputation. Furthermore, Aliaxis' well-known brands have a strong identity and track record and are firmly established in the geographic markets they

serve. Operations encompass the well-established markets of Europe and North America as well as Latin America, Australasia, Asia and the Middle East and Africa. Furthermore, Aliaxis is the tried and tested partner across a broad cross-section of segments beyond the

FORECAST OF CURRENT HEALTH EXPENDITURE (CHE) IN THE GCC



Source: Alpen Capital, WHO, IMF, WTW, MOH and Statistical organizations in the GCC
 Note: E-Estimate, F-Forecast; The market size during 2016 is based on actual healthcare indicators and inflation



SPOTLIGHT ON WEFATHERM PP-R PIPES AND FITTINGS



Production: Developed and manufactured in Germany for over 30 years



Materials: Polypropylene Random Copolymer (PP-R) manufactured with advanced mould and process technology. Structural integrity is maintained by using only virgin polypropylene instead of recycled materials



Certifications: ISO9001, ISO14001, ISO 15874, DIN 8077/8078, DVGW approved, certified by WRAS for hygiene qualities and standards, and the Singapore Green Building Council as a 'Good Building Product'

Driven by growing populations, increasing life expectancies and the rising prevalence of lifestyle diseases, countries across the region are making concerted efforts to ensure that medical facilities are world-class.

healthcare sector. The Group's expertise also encompasses hospitality, high rise construction as well as water treatment solutions in the industrial sector.

QUALITY THAT YIELDS REASSURING RESULTS













Choosing superlative European products renowned for their reliability and durability is key in the healthcare industry. There is no substitute for choosing products that meet the highest European and international standards which are accompanied by local support and product and group insurances.

When reliability is called for, German made products such as Wefatherm PP-R piping ensure leak-free results. Furthermore, by choosing products which meet best practice, maintenance costs are reduced and legislative and environmental regulations are reassuringly met. Wefatherm was the product of choice in several significant projects across Saudi Arabia. Its unique and efficient combination of properties was important to The Saudi German Hospital in Damman which is the jewel in the crown of Batterjee Medical

City, one of the largest private healthcare cities in the region. Similarly, the Clemenceau Medical Center in Riyadh and the Dr. Sulaiman Habib Hospital in Khobar recognised the superlative properties of this product. Its resistance to internal pressure, flexibility and impact make it a clear front runner in terms of longevity and safety. It exhibits superb engineered resistance and does not suffer from corrosion when exposed to iron particles. Moreover, testing via international certifications such

as ISO 15874 unequivocally prove that its service life is impressive.

Reliability, quality and service life were also key considerations to Al Amiri Hospital Kuwait and King's College Hospital Dubai, one of the oldest medical institutions in the UK, when it made its Dubai debut. Both establishments relied on Aliaxis Group's Akatherm HDPE. Made of high density polyethylene HDPE with leak free joints and a formidable life cycle of up to

+ Material advantages Akatherm HDPE		
 Impact resistant and tough: Unbreakable at temperatures above 5°C	 Elastic and flexible: Adjusts to local ground movement for underground use	 Thermal resistant: Applications possible between -40°C and 80°C. Up to 100°C for short periods of time.
 Chemical resistant: Suitable for transport of polluted waste water	 UV & weather resistant: Unrestricted outside use through carbon black additives	 Wear resistant: Lower cost due to long lifetime
+ System advantages		
 Welded system: Simple and secure installation using butt-welding and electrofusion	 Homogeneous welded joints: Pull tight and leak proof for a completely closed system	 Prefabrication: Fast and cost-saving installation of repetitive systems
 Light in weight: Cost saving in transport and handling	 Low heat conductivity: No condensation insulation required during short periods of cooling	 Non-toxic: 100% recyclable and environmental friendly

“Its resistance to high temperature and chemicals make it the perfect choice within the healthcare sector.”



السعودي الألماني - دبي
SAUDI GERMAN HOSPITAL

Saudi German hospital in Batterjee Medical City, Damman, Saudi Arabia

DID YOU KNOW?


“Investment in the Gulf Cooperation Council (GCC) healthcare sector is booming”


In the GCC, the healthcare sector accounts for 4% of construction


The expenditure on these projects amounts to \$60.9 Billion


Plumbing accounts for approximately 1% of this cost


100 years, it was the natural choice to ensure quality and operational efficiency. Its resistance to high temperatures and chemical resistance make it the perfect choice within the healthcare sector. In addition, its flexibility and the ability to be pre-fabricated add to its widely acclaimed excellence in these demanding environments.

Effective chemical resistant plumbing was also a major consideration of Jalila Children's Hospital in Dubai, part of the Al Jalila Foundation. Their solution was Vulcathene a product with a pedigree of 60 years and approved by the British Board of Agrément. This specialist solution offers the ultimate solution to chemical waste disposal because of its high resistance to chemical attack and conveyance of

aggressive chemicals, as well as other liquids used in chemical plants and laboratory waste. Manufactured from co-polymer polypropylene with 3% carbon black ultra-violet stabiliser, it is available in a comprehensive range of pipe fittings from 38 mm to 102 mm. Two easy jointing methods, mechanical for demountable joints and enfusion (electrofusion) for welded joints, also ensure that Vulcathene offers total versatility for designers and installers of chemical waste systems.

BALANCING PRICE AND RISK

Ultimately, healthcare facilities have unique functional requirements that are different from many other facilities. Hospitals operate around

the clock and are first and foremost designed and built to provide for the care and healing of patients. This means that behind the scenes reliability is of paramount importance for both safety and long-term operational efficiency. Balancing risk against price is not an option in an environment where it could result in life or death. As the growing GCC healthcare sector continues to set new benchmarks in innovation and efficiency, it is no surprise that Aliaxis Group has become the solution provider of choice. 

Why wait for disaster to happen? Incidents can be avoided by turning to experts with high quality, reliable products.

SPOTLIGHT ON VULCATHENE CHEMICAL DRAINAGE



Production: Developed and manufactured in the UK with over 60 years performance track record



Materials: Co-polymer polypropylene with 3% carbon black ultra-violet stabilizer exhibiting very high resistance to chemical attack



Certifications: ISO 14001, ISO 527, ISO 178, ISO 180, ISO 2039/2, ASTM D 785, ISO 306A, BS 2782; 102 A, ISO 75/A and /B, ASTM D 648-A-B, ISO 3795, in accordance with BS EN ISO 9001, and BBA tested/approved for chemical drainage

UNCOMPROMISING STANDARDS AT KING'S COLLEGE HOSPITAL, DUBAI

KING'S COLLEGE HOSPITAL IS ONE OF THE OLDEST MEDICAL INSTITUTIONS IN THE UK AND HAS BEEN A PIONEER IN THE MEDICAL FIELD SINCE 1840. IT IS SOON TO OPEN THE DOORS TO A NEW STATE-OF-THE-ART HOSPITAL IN DUBAI HILLS IN THE HEART OF MOHAMMAD BIN RASHID CITY.



Akatherm dBlue acoustic drainage.

THE CHALLENGE

The arrival of King's College, a global pioneer, to Dubai demands the highest of standards to maintain its global reputation which has been championed over 177 years. Reliability and durability is therefore important in the procurement process. While efficiency is important, other considerations include

nurturing an environment conducive to patient well-being. This means limiting noise pollution in the hospital.

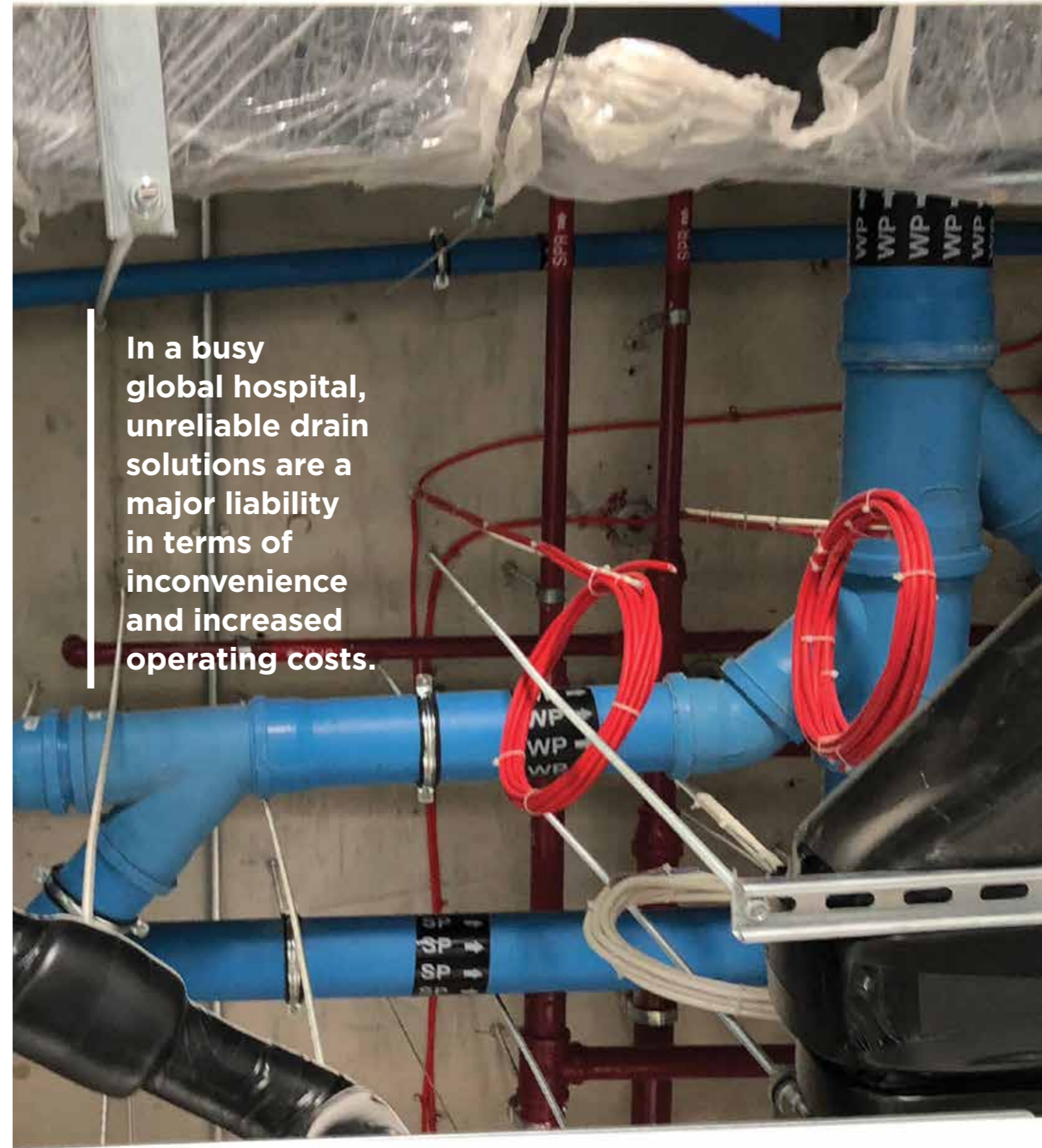
THE SOLUTIONS

King's Hospital selected Aliaxis Group to provide reliable solutions such as Akatherm dBlue and HDPE. Akatherm, part of the Aliaxis Group, has over 50 years of proven experience in drainage and focuses on quality and innovation. Akatherm dBlue acoustic soil and waste system was therefore King's College Hospital's optimal choice for noise reduction. The system consists of a three-layer design in which different material media prevent noise propagation. Ultimately patients can recover in peace and quiet.

Akatherm HDPE also ensures that no compromise is made on quality. In a busy global hospital, unreliable drain solutions are a major liability in terms of inconvenience and increased operating costs. Made from durable green material, Akatherm HDPE's recyclability, strength and longevity make it a natural choice for long-term efficiency and reduced operating costs.

Ultimately, delivering high quality trusted healthcare requires 'behind the scenes' products that complement such high standards. By turning to Aliaxis Group to provide proven German engineered products, King's Hospital has ensured it continues to uphold its reputation for excellence and efficiency.

Akatherm dBlue acoustic drainage installation at King's College Hospital, Dubai.



In a busy global hospital, unreliable drain solutions are a major liability in terms of inconvenience and increased operating costs.



SPOTLIGHT ON KING'S COLLEGE HOSPITAL DUBAI



Product:
Akatherm dBlue &
HDPE drainage system

**Year of
Completion:**



MEP Consultant:
Whitby & Mohajer
Engineering (WME)
Consultants, Dubai



MEP Contractor:
Shapoorji Pallonji
Middle East, Dubai

SPOTLIGHT ON AL JALILA CHILDREN'S SPECIALITY HOSPITAL



Product:
Vulcathene



Year of Completion:
Q1, 2014



MEP Consultant:
Studio Altieri
International,
Dubai



MEP Contractor:
Horizon Gulf
Electro
mechanical
Services LLC

SETTING NEW BENCHMARKS AT AL JALILA CHILDREN'S SPECIALITY HOSPITAL

AL JALILA CHILDREN'S SPECIALITY HOSPITAL IS THE FIRST DEDICATED CHILDREN'S HOSPITAL IN THE UAE. AS PART OF THE JALILA FOUNDATION, IT WAS CREATED BY HH SHEIKH MOHAMMED BIN RASHID AL MAKTOUM, VICE PRESIDENT AND PRESIDENT OF THE UAE, AND RULER OF DUBAI.

THE CHALLENGE

With a clear vision of becoming one of the best paediatric facilities available globally, Al Jalila Hospital is a symbol of the UAE's commitment to strengthening the capacity of the health-care sector. Safety and standards were therefore an important consideration when identifying a highly efficient chemical resistant plumbing system.

THE SOLUTIONS

Al Jalila Foundation selected Aliaxis Group's product Vulcathene. This is a completely purpose-designed chemical resistant plumbing system that has been specified and installed in the laboratories of schools, universities, hospitals and research facilities worldwide for over 60 years. Vulcathene's remarkable qualities include excellent tensile strength; high chemical resistance rating; abrasion resistance; weather resistance and the capability to withstand a wide range of temperatures. In summary, it puts reliability, safety and long-term efficiency firmly at the top of the agenda.



Vulcathene specialized chemical drainage.

HOW HOSPITAL HYGIENE & COMFORT MAKE ALL THE DIFFERENCE

THE GCC HEALTHCARE CONSTRUCTION MARKET WILL REACH US 19.5 BILLION BY 2020. WE LOOK AT HOW THE SMALLER DETAILS ARE CRUCIAL TO THE BIGGER PICTURE.

The GCC's healthcare construction market continues to grow at a steady rate and is projected to meet a staggering US 19.5\$ billion by 2020 (Alpen Capital). In building progressive 21st century healthcare facilities, it is the fine yet critical details that ensure end-users or patients receive the best

hospital experience possible. We look at how benchmark hygiene and comfort standards can be achieved.

MAKING HOSPITALS HEALTHIER

Hygiene has to be top of the agenda for all hospitals. This means limiting bacteria, disease, not to mention drainage issues and smells. Measures to ensure infection control are critical to the design and operation of hospitals.

Legionella bacteria, for example, develops in pipework where the temperature varies between 25 and 45 degrees Celsius. Furthermore, sludge, corrosion or scale in pipes has been proven to be an aggravating factor in the formation of these

bacteria. Although there is no guarantee of avoiding such diseases, prevention can be factored in through the use of reliable sanitary and pipework solutions.

Health facilities professionals must weigh up a number of considerations when selecting plumbing fixtures and fittings. Infection prevention, longevity and accessibility are key considerations. Cutting corners with cheaper unproven products is simply not advised in a healthcare environment. This is why it is advantageous at commissioning stage to turn to a proven expert like European company Aliaxis Group whose quality pipework demonstrates best practice in healthcare environments. Furthermore, the products

are rigorously tested and have proven track records which astringently meet international standards.

Aliaxis Group's Akatherm HDPE, for example, combines flexibility with robustness and reliability. Its powerful combination of high temperature and chemical resistance properties make it ideal in healthcare environments. These factors were taken into consideration by world renowned King's Hospital Dubai when they selected Akatherm HDPE. A further incentive was the product's impressive life cycle of up to 100 years making it the perfect choice in terms of long-term operational efficiency and ROI.



By choosing Aliaxis Group products, the GCC healthcare industry can be assured of making the difference not only to hygiene, reliability and comfort, but also to long-term operational costs.

Another leading Dubai hospital which benefitted from the excellence of Aliaxis Group products was the Neuro Spinal Hospital in Jumeirah. This healthcare facility chose to use Marley PVC drainage. Marley, a brand of Aliaxis, has been a trailblazer in drainage solutions since 1955 and its global reputation for high quality innovative products proceeds it.

Similarly Vulcathene, another of Aliaxis Group's products, enjoys over 60 years of proven excellence. Purpose designed for safe chemical drainage, it is manufactured from co-polymer polypropylene with 3% carbon black ultra-violet stabilizer. This has very high resistance to chemical attack and is well suited to the conveyance of aggressive chemicals and other liquids. Vulcathene was the choice of Al Jalila Children's, the first dedicated children's hospital in the United Arab Emirates. This state-of-the-art medical facility was created under the directives of His Highness Sheikh Mohammed Bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE, and Ruler of Dubai and is already setting benchmarks in the field of paediatric care.

Creating healthy environments also involves avoiding distasteful drainage smells. Odours can have an effect on health and recovery in hospital scenarios as they cause discomfort to both patients and medical staff. In addition, research suggests that odours can also influence cognitive processes that affect task performance and this could inhibit the work of medical staff (Clements-Croome, 2008). It's therefore important that issues such as these are considered at the design, commission and construction of healthcare facilities.

Aliaxis Group's Studor, offers reassuring solutions that eliminate drainage smells with a maintenance-free drainage system. Renowned as a highly specialized leader in drainage ventilation and air admittance valve technology, the concept is simple yet effective. Fundamentally, an efficient drainage system design is about managing the mix of air and water. More precisely, it is about managing the air pressure regime within the boundaries that maintain a water trap seal in the trap. Studor's active drainage ventilation products

replace traditional secondary ventilation within drainage systems and prevent the loss of water seals in traps. This in turn reduces odours and costs while eliminating the need for passive pipe venting and costly roof penetrations. Another advantage is the provision for single-stack installation which ultimately offers more internal space allowing freedom to create more aesthetically pleasing and comfortable interiors.

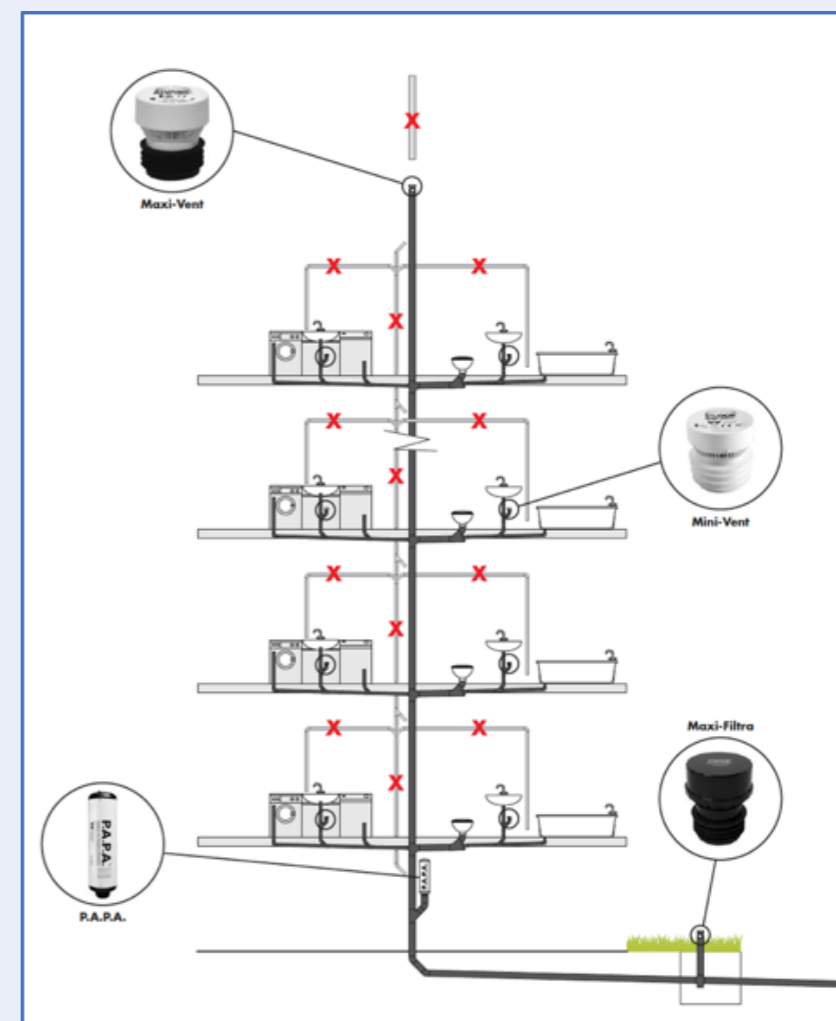
Hospital fixtures and fittings should also be selected because of ease of cleaning, although aesthetics and functionality are also important. This was a consideration of Al Amiri Hospital in Kuwait and Thumbay Hospital in Ajman, when they chose Aliaxis Group's SANIT concealed cisterns. Engineered and manufactured in Germany, the sleek design not only creates space, but the behind the wall design can be combined with wall-hung WCs to optimally limit dust accumulation. In addition, infrared touch free flush plates and the option of a hygienic coating on the stainless push plates are effective in the prevention of bacteria transfer.



SANIT's infrared 'INEO SCOP' flush plate.



STUDOR AIR VENTILATION PRODUCTS REDUCE ODOURS & COSTS



A PEACEFUL NIGHT'S SLEEP

Hygiene is critical, but sleep is also vital for maintaining health and healing and a quality hospital experience. No matter how impressive the facilities are, how wonderful the medical staff are, or how well-appointed the hospital room might be, sleep cannot be overlooked.

Research tells us that during sleep, essential growth hormones responsible to health and repair are secreted. Sleep deprivation has serious

impacts including decreased pain tolerance, increased immunosuppression, delayed healing, confusion and disorientation (Evans JC and French DG, 1995) higher blood pressure (Arora VM, Chang KL, Fazal AZ et al, 2011) and higher heart rate (Peruzzi, 2005). More alarmingly, some researchers even believe that sleep deprivation can lead to higher mortality rates post discharge.

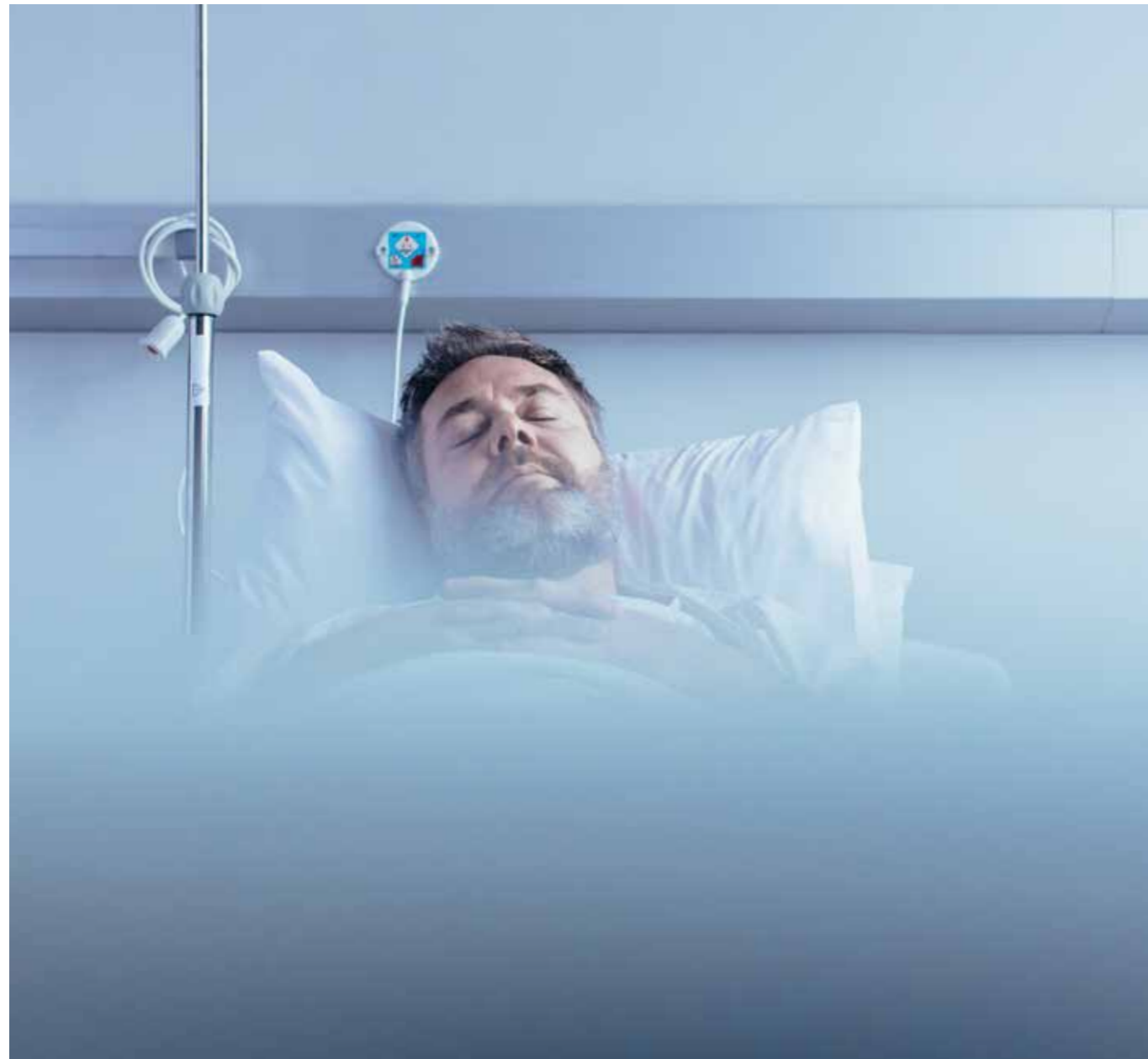
This is why it is so important for hospitals to take steps to enhance the quality of patient

sleep in their facilities. Sleep is fragile and most patients are disturbed during slow wave sleep, which is the essential restorative phase. The majority of sleep deprivation in hospitals is caused by unnecessary noise and although earplugs might help, it is the imperceptible things that matter.

Unfortunately, hospitals are noisy and they are getting noisier. Several studies performed by the WHO (World Health Organisation) reveal that hospital noise levels have

been increasing consistently since 1960 (Ryherd, Wayne & Ljungkvis, 2008). WHO recommend that noise levels should not exceed 35 dB(A) in rooms where patients are treated or observed (Berglund et al., 2003 as cited in Richardson et al., 2009) and 30 dB(A) in ward rooms (Ryherd, Okcu, Hsu, & Mahapatra, 2011). So what does 30-35 dB(A) sound like? Transport yourself to the depths of the desert on a starry night. You are sitting around a camp fire enjoying the peace and maybe speaking

in hushed convivial tones with your companions. This is what 30 dB sounds and feels like. Now imagine yourself in a hospital bed recovering. You are exhausted and about to doze off. Suddenly you are jolted by screeching pipework in the walls and just as you try to doze off again you begin aware of the torturous regularity in which toilets are being flushed by strangers around you. These are seemingly small irritations, but they will have large implications on your recovery rate.



WHAT IS QUIET? A DECIBEL EQUIVALENT

120dB
Front row at a rock concert

100dB
Normal average car or house stereo maximum volume

60dB
Normal conversation

40dB
Whispering

30dB
Totally quiet nighttime in desert

15dB
Pin drop from a height of 1 centimetre heard at a distance of 1 metre

13dB
Incandescent light bulb hum

10dB
Absolute silence

Hospitals, such as King's College Dubai who used dBlue acoustic drainage solutions, now realize the importance of reducing noise pollution for patient welfare. Furthermore, this why so many other GCC hospitals are turning to Aliaxis Group to find credible and silent solutions. With a portfolio of renowned European brands, Aliaxis provides a one-stop solution for plumbing and sanitary systems. This includes everything from hot and cold water systems, soil and waste systems, and concealed cisterns. The comprehensive product portfolio includes

leading reliable brands such as SANIT, Wefatherm, Durapipe's Vulcathene, Akatherm HDPE and dBlue, Marley, Redi, Studor and many more.

The bottom-line is that by choosing Aliaxis products the chances of a good night's sleep are greater. Take the example of Akatherm's dBlue acoustic drainage system which uses a 3-layer pipe structure to reduce noise levels to 18dB(A). That's equivalent to the sound of a pin dropping. This means that sound transfer is practically non-existent leading to the opportunity for patients to enjoy restful and restorative

sleep that aids the healing process. This is why the soon to be completed Royal Omani Police Hospital chose to use this product. Its acoustic performance, resistance to heat and chemicals and longevity offered all-round quality solutions that were compelling within a healthcare context.

Thankfully by partnering with Aliaxis, and especially in the case of higher constructions, a much more innovative system called Akavent will ensure that none of this is necessary. Akavent creates more space for thoughtful design and controls pressure

in the pipes so that your guests will never ever have to suffer the discomfort of smelly sewer gases in their bathroom.


WHERE COMFORT MEETS COST EFFECTIVENESS

Whether you are an owner, operator or investor, understanding the challenges and opportunities that create ultimate comfort are key to your goals. Intelligent solutions not only create the 360 degree comfort expected by increasingly discerning guests, but save on costs in the long run. Hotel bathrooms need to make a statement as

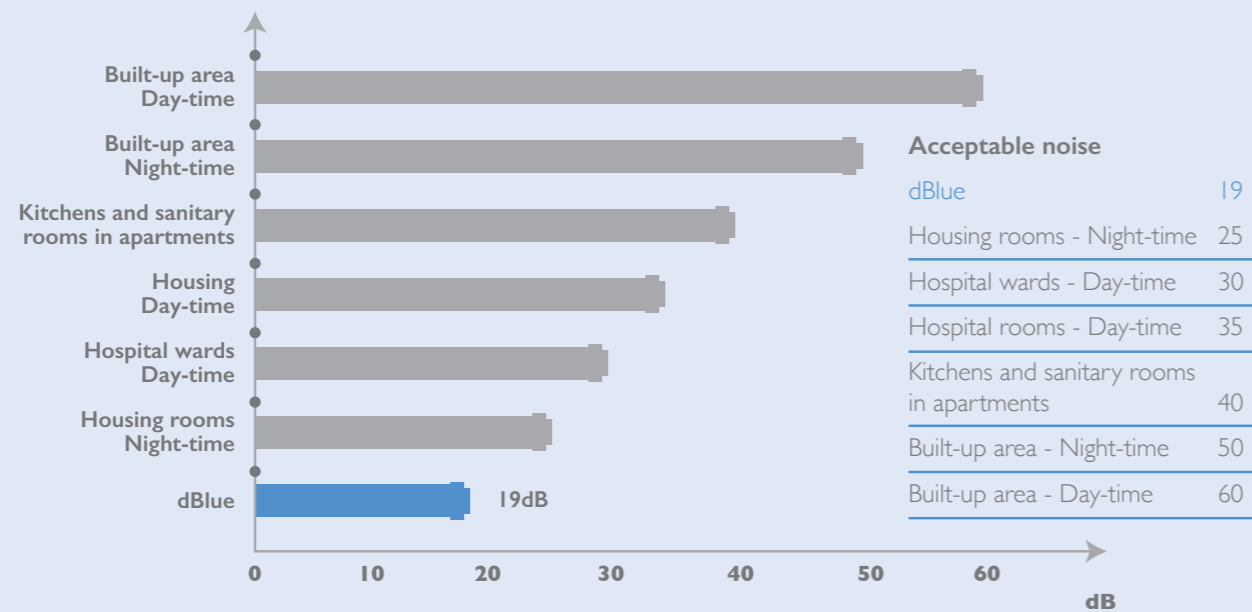
luxurious havens that function with seamless ease and symbolise your brand.

MAKING THE DIFFERENCE

Hygiene and comfort are key differentiators in creating the optimal healthcare environment. As the GCC focuses on investment in this field, it has the potential to position itself as a leader if it adheres to setting high standards. To stay at the forefront and set global standards, it is imperative to focus on utilizing the finest products and considering the finer details. By choosing

Aliaxis Group products, the GCC healthcare industry can be assured of making the difference not only to hygiene, reliability and comfort, but also to long-term operational costs. 

ACCEPTABLE NOISE



At Akatherm's HDPE headquarter in Panningen, Netherlands.

STYLE MEETS FUNCTION AT AL AMIRI HOSPITAL, KUWAIT

AL AMIRI HOSPITAL IS LOCATED IN THE SHARQ AREA OF KUWAIT CITY. THE PROJECT INVOLVES THE EXPANSION OF THE HOSPITAL THROUGH THE DESIGN AND CONSTRUCTION OF A NEW BUILDING AND RENOVATION OF THE EXISTING BUILDING.

The new hospital will accommodate 416 beds over a site area of approximately 13,400 square metres and will have four underground floors and 13 upper floors. It will be connected to the original hospital by a tunnel and suspended footbridge.

THE CHALLENGE


This ambitious hospital project consists of four underground floors and 13 upper floors. The challenge was to find robust and reliable drainage solutions that complemented both the design and function of the hospital.

THE SOLUTION

It is critical that a busy hospital operates with solutions that place reliability firmly first. To meet these criteria, Al Amiri Hospital used Akatherm HDPE because it offers uncompromising reliability and durability in hospital environments. Furthermore, the high temperature and chemical resistance properties mean that the system is durable, flexible and safe. Selecting durable

and long-lasting quality also ensures operational efficiency which in turn delivers healthy ROI.

Hospital design is increasingly focused on improving aesthetics as this has a direct effect on patient well-being. To achieve seamless and elegant design that maximises space, Amiri Hospital used Aliaxis Group's SANIT concealed cisterns. These German engineered products not only offer compact design that creates space, but limit dust accumulation due to their sleek behind the wall design. Further consideration to hygiene is given in the infrared touch free flush plates. In addition, the option of a hygienic coating on the stainless-steel push plates further prevents the

transfer of bacteria, making it the perfect choice for hospital environments. 



Al Amiri Hospital expansion under construction.



SANIT offers a large range of innovative flush plates.



In dollar terms, Kuwait makes up 11% of GCC healthcare projects. This is because of mega projects, such as Al Amiri Hospital, which are defining the hospitals of tomorrow.

SOURCE: BNC Report on GCC Healthcare

SPOTLIGHT ON AL AMIRI HOSPITAL, KUWAIT



Product: Akatherm HDPE drainage system & SANIT concealed cisterns and operating plates



Year of Completion: Expected Q2 2018



MEP Consultant: KEO, Kuwait



MEP Contractor: Bader Al Mulla & Brothers Company, Kuwait



SILENT SOLUTIONS AT THE ROYAL OMAN POLICE HOSPITAL MUSCAT

THE ROYAL OMAN POLICE (ROP) HOSPITAL IS LOCATED AT AIRPORT HEIGHTS MUSCAT AND WILL BE A 460-BED MEDICAL FACILITY THAT CAN BE EXPANDED TO 600 BEDS IN THE FUTURE. THE PROJECT INVOLVES THE CONSTRUCTION OF A 90,000 SQUARE METRES HEALTHCARE FACILITY WHICH WILL INCLUDE A MAIN BUILDING OF 6 FLOORS TOGETHER WITH 25-30 AUXILIARY BUILDINGS.



The different floors of the hospital will house several specialised individual hospitals which will provide medical care to members of the Royal Oman Police and their families.


THE CHALLENGE

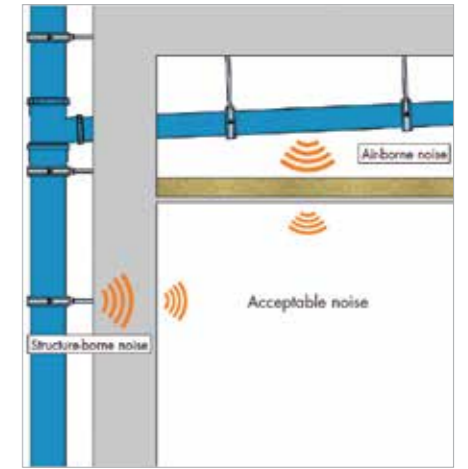
Acoustics in healthcare environments are complex and require careful, strategic design. Creating a comfortable acoustic environment plays an important role in supporting safety, health, healing, and well-being for all occupants. ROP Hospital therefore required a drainage solution that had acoustic performance which was matched by reliability and cost effectiveness in terms of installation and long-term efficiency.

THE SOLUTION

Akatherm dBlue acoustic drainage offered ROP Hospital Oman the perfect solution. The combination of acoustic performance, resistance and mechanical strength proved to be invaluable within a hospital environment. The dBlue system uses a 3-layer pipe structure to reduce noise levels to 18 dB(A), an important consideration in hospital environments. Apart from its

renowned noise reduction properties, Akatherm dBlue was also suitable because of its high resistance to heat and chemicals. Ambitious construction projects such as ROP Hospital also require cost effectiveness and the ability to meet strict project deadlines. Akatherm dBlue was therefore also preferable because its installation is much faster than any PVC solvent

weld system and installation costs are significantly cheaper than alternatives such as cast iron. Ultimately, the choice of Akatherm dBlue ensures a silent solution that will assist patient well-being, whilst offering reliability that leads to long-term reduced operation costs. 



Akatherm dBlue's acoustic properties are effective in hospital environments.



Render of Royal Oman Police Hospital, Muscat.

SPOTLIGHT ON ROYAL OMAN POLICE HOSPITAL, MUSCAT



Product:
Akatherm dBlue
acoustic drainage



Year of Completion:
Expected 2019



MEP Consultant:
Option One, Kuwait



MEP Contractor:
Gaffar Engineering
& Contracting,
Oman

Muscat, Oman.



Joseph Coutinho, MEP Contractor International
Electromechanical Services LLC.

“Behind the scenes elements are just as important.”

JOSEPH COUTINHO IS THE EXECUTIVE DIRECTOR OF LEADING MEP CONTRACTOR INTERNATIONAL ELECTRO-MECHANICAL SERVICES COMPANY (IEMS). JANE JACOBSEN OF ALIAXIS GROUP JOINED HIM TO DISCOVER HOW LEADING MEP PROVIDERS PUT QUALITY FIRST IN HOSPITAL BUILDS ACROSS THE REGION.

INSIDER INSIGHTS INTO HEALTHCARE CONSTRUCTION

HOW DID YOU GET TO WHERE YOU ARE TODAY?

Our journey started 50 years ago and I have been fortunate to be part of this for 38 years. We now have over 2,400 employees and are renowned for our expertise in the region.

Today's success is due to our philosophy. Our principal philosophy is to provide excellent services to the client, the consultant and main contractor. Customer satisfaction is key. For us there is no compromise and no cutting of corners. What's more, we are rigorous in ensuring our products are fit for purpose. We never compromise on quality. We use superior products and our technicians are highly trained. Some have been with us for over 25 years; we don't believe in a hire and fire approach. Our clients, suppliers and workforce are loyal and we let our quality speak for our reputation. These principles have taken us to where we are today and we are proud to have executed projects in the UAE, Iraq, Jordan, Libya, Yemen, Nepal, Sri Lanka, Mauritius, Oman and India.

CAN YOU TELL US MORE ABOUT YOUR COMPANY?

We are leaders in MEP services covering everything from Air Conditioning, Ventilation, BMS, Electrical Works, Fire Alarm and ELV Systems, CCTV and Access Controls. Plumbing, Drainage and Fire Fighting services are also an important part of our remit.

WHY DO YOU THINK CLIENTS TURN TO IEMS IN THE MEP FIELD?

Clients know our reputation for quality and we will not compromise on this. We never go for local or cheaply made pipes or fittings in our product choice. We advise the client that we only use superior products as we believe in using higher specifications to ensure quality. This means that the return in investment is healthier in terms of reliability and lower operating costs. We could save money on cheaper products, but we refuse to compromise.

WHAT DO YOU LOOK FOR WHEN CHOOSING A SUPPLIER FOR PRODUCTS?

Our relationship with the suppliers is key. All our suppliers are thoroughly checked and we

implement in-depth research on these suppliers and their products. When it comes to the products, we assess how long it's been in the industry, when it's been used, where it's been used, and in which sectors.

We cannot take the risk due to cheaper sub-standard products and we go to great lengths to work with the particular suppliers we trust and know have high spec. products. Naturally cost is important in any contract, but quality must always be guaranteed and we personally visit the factory of any new suppliers to ensure this.

HEALTHCARE CONSTRUCTION IS CURRENTLY GROWING IN THE GCC, WHAT DO YOU THINK ARE THE KEY PRIORITIES IN THE MEP FIELD?

Any developer in this field must have healthcare experience. Consultants and contractors also have to demonstrate prior experience and it is important to work with suppliers that have an impeccable reputation in the MEP industry.



CAN YOU SHARE WITH US SOME INSIGHTS INTO IEMS HOSPITAL PROJECTS?

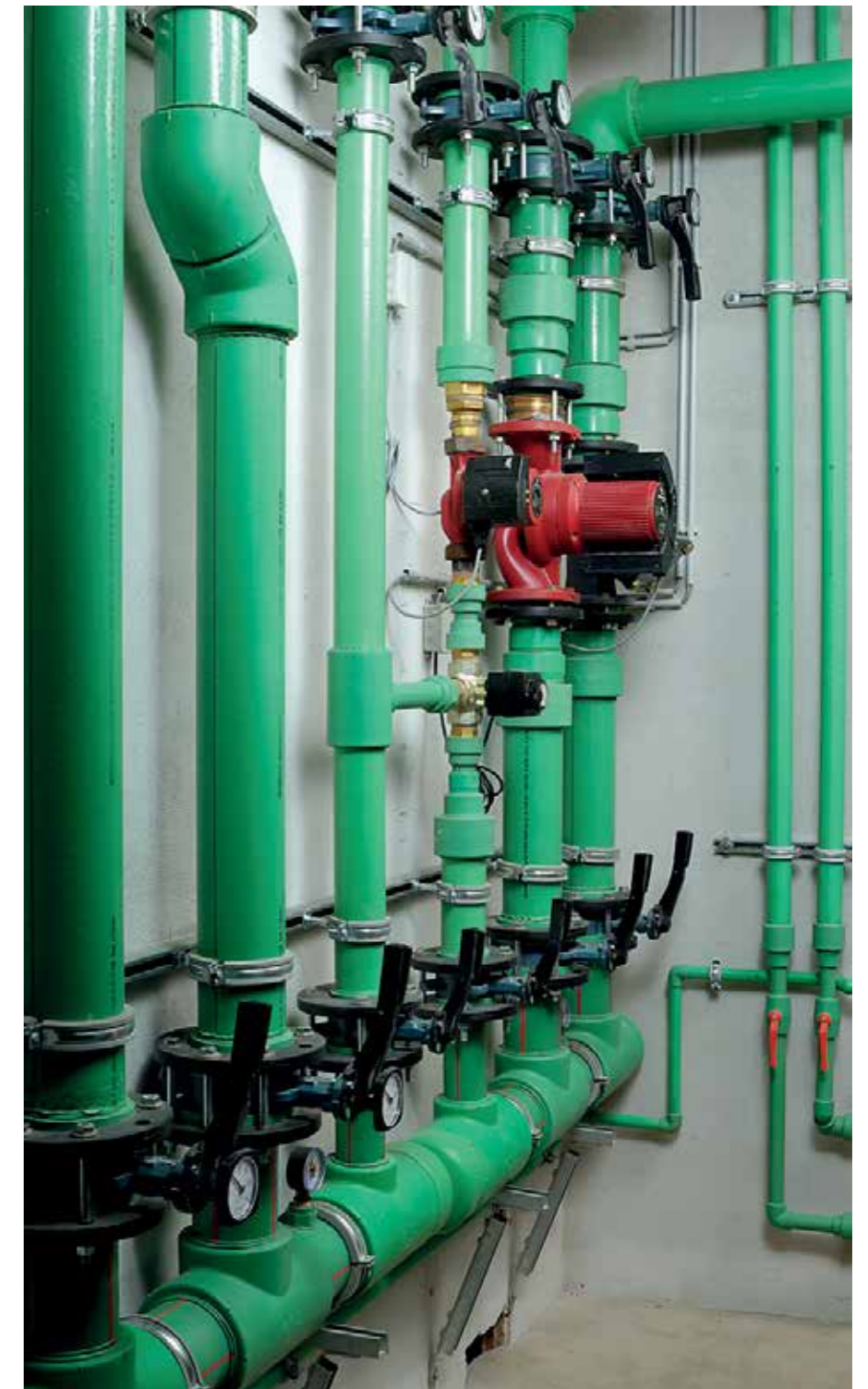
We've been MEP contractors for several projects across the region and beyond. We were MEP contractors for Aster Hospital at Al Qusais together with Arif & Bintok Consulting Architects & Engineers and Medcare Hospital for Women and Children at Al Safa Second with Bel Yoahah Architectural & Engineering Consultants, which was completed last year. In addition, we've worked on number of hospitals in the Sultanate of Oman and India.

HOW IMPORTANT IS SUSTAINABILITY IN HOSPITAL BUILDS?

Sustainability and green building requirements are measures that governments and consultants expect. Materials and installation methods have to meet with these requirements and that of global standards such as LEED. Consultants monitor this closely and this means we are always vigilant. We use reputable products tried and tested in the field of sustainability and comply with the astringent hygiene requirements of the Healthcare Industry. Although there are cheaper routes, it's always better to go with the quality that gets results.


WHAT'S YOUR STRATEGY FOR THE FUTURE?

We have always been consistent and conservative in our approach, and that's why we stay the course. Even during the construction boom in 2006/7 we remained steady



Wefathern hot & cold water supply system.

and unlike other companies we didn't mushroom out of proportion. When the financial meltdown came these companies were not able to withstand the disruption and failed to survive. We have tactically controlled our growth

and we have always put quality, safety and reliability first. This is what differentiates us and maintaining this strategy is a key factor in ensuring the continuation of our success story into the future. 



Small flush, with option of 2l-flush only.

SANIT's concealed cistern with dual flush water saving technology.

ABOUT ALIAXIS

We are a global leader in the manufacturing and distribution of advanced plastic piping systems. With a global workforce of more than 16,200 employees, Aliaxis develops and produces both standard and tailored solutions that meet the clients' most demanding expectations. We are active through more than 100 manufacturing and commercial companies, operating in over 45 countries. Aliaxis is privately owned, with our global head office in Brussels, Belgium. Our Middle East Africa (MEA) division offers reassuring local support and expertise.

KEY MIDDLE EAST & AFRICA BRANDS:



HDPE & acoustic drainage systems



PVC plumbing and drainage



Concealed cisterns, operating plates & shower channels



PP-R hot & cold water supply systems



Specialized chemical drainage systems

THE ALIAXIS GROUP HAS OTHER BRANDS UNDER ITS UMBRELLA. FIND OUT MORE ON WWW.ALIAXIS.COM



WE CARE ABOUT HEALTHCARE:

Aliaxis Group is committed to providing the finest services and products to the region's growing healthcare industry. We are dedicated to setting industry benchmarks by providing the highest quality products to healthcare projects across the globe. Years of experience and research has ensured that we provide the healthcare industry with a reliable brand portfolio which is internationally renowned for its safety, efficiency, hygiene and sustainability.

THIS ISSUE WAS PREPARED BY:

Jan Lohoff - Aliaxis EMEA Regional Director MEA - jlohoff@alixaxis.com
 Jane Jacobsen - Aliaxis EMEA Marketing & CRM Manager MEA - jjacobsen@alixaxis.com

ALIAXIS MIDDLE EAST & AFRICA REGION:

Middle East offices: UAE and Saudi Arabia
 Africa offices: Morocco, Kenya, Nigeria, Namibia, and South Africa.

Aliaxis



HDPE & acoustic
drainage systems



PVC plumbing
and drainage



Concealed cisterns,
operating plates &
shower channels



PP-R hot & cold water
supply systems



Specialized
chemical drainage
systems

www.aliaxis.com
www.aliaxis-gulf.com

Registered Office
Aliaxis S.A./N.A.
Avenue Arnaud Fraiteur 15-23
1050 Brussels, Belgium

Aliaxis Building Solutions (ABS)
Marketing Services DMCC
P.O. Box 488100
Office 702, Indigo Tower, Jumeirah
Lakes Towers, Dubai, UAE