



AVK SOUTHEAST ASIA
DELIVERING AFFORDABLE
HIGH QUALITY

Expect... **AVK**



The leaders representing different business units and regions of the AVK Group gathered and reunited in Skanderborg Park Hotel, Denmark for the first physical Global Management Conference in four years. On June 9 and 10 2022.

Photo by Per Bille.

CONTENTS

3rd AVK Southeast Asia Regional Magazine

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Frontpage Image

DAM Interconnection between Tembesi and Muka Kuning, Indonesia. The project was completed in 2020 by PT Tirta Putra Malindo Sejati (TPMS), distributor of AVK Fusion Indonesia.

The connection stretches over a distance of nearly 3.6 km and has a flow rate of 600 litres per second with a maximum capacity of 720 litres per second.

Welcome notes from Gert Borrits, Regional Managing Director AVK Southeast Asia	5
The much anticipated Nusantara Tour 2022, AVK Fusion Indonesia	6
Hoa Lien water treatment plant in Da Nang city, AVK Vietnam	10
AVK 36/80 Joint-success with Male' Water, AVK Malaysia	12
[Knowledge] AVK Smart Water, digitalizing water distribution network	14
Tuas South, Singapore largest desalination plant, AVK Singapore	16
43rd PAWD National Convention 2022, AVK Philippines	18
AVK 360° project solution with water utility companies, AVK Malaysia	20
Ho Da Den water treatment plant expansion in Vung Tau, AVK Vietnam	22
Singapore mass rapid transport stations, AVK Singapore	24
[Knowledge] Beat the leaks, what is water loss and non-revenue water	26
AVK Orbinox - Valves for water treatment	28
GlobalFoundries manufacturing plant expansion, AVK Singapore	29
AVK Southeast Asia exhibition Q3/22-Q1/23 and news	30
AVK Industrial - Valve solution provider for the industry	32
AVK Southeast Asia contacts	35



WELCOME NOTES

DEAR VALUABLE PARTNERS



Dear Valuable Partners,

While the world, at the moment is well on the way to successfully working its way out of the pandemic and returning back to a somehow normal way of life, we at AVK are also pleased to say that we are on the way back to our ultimate goals of supporting our customers and adding value to them.

We are however still challenged daily by supply chain issues that are very difficult for us to manage and most of you are no doubt in the same situation.

I'm pleased to present to you all, our new edition of the 3rd AVK Southeast Asia Magazine. In this edition we bring you a broad variety of topics. First of all, we take you through a number of exciting valve applications around the regions, from the Philippines in the

north to Indonesia in the south.

In Indonesia we were finally able to restart our visit to local water works across the Java and Bali Islands, an enormous undertaking that we feel has been very much appreciated by our partners. I would also like to take the opportunity to highlight a very successful story from the Maldives where our series 36 gate valves have successfully been installed in vast numbers.

On page 26 we discuss how to reduce leakage and NRW by following 10 suggested steps in identifying the possible focus areas.

In this edition we are also taking the first steps to unveiling the wonderful

world of AVK's Industrial brands that are also available to our customers and partners around the Southeast Asia region. This time it will only be a short introduction and description, but you can all look forward to a more comprehensive dealing with many strong brands in the next edition of the magazine. Interactive links to stories, videos and contacts are added throughout the contents to help navigate your reading.

With this I would finally like to wish you all happy reading.

Gert Borrits
Regional Managing Director
AVK Southeast Asia



THE MUCH ANTICIPATED NUSANTARA TOUR INDONESIA



Nusantara Tour 2022

After more than 2 years of the pandemic situation, it is now finally getting under control and we can see light at the end of the tunnel. AVK Fusion Indonesia is more than delighted because after such a long wait, we can finally carry out the much anticipated Nusantara Tour which was postponed earlier due to the pandemic.

The implementation of Nusantara Tour is carried out in stages which will take approximately 3 months to complete. The activities started in early June will focus on the 3 Islands of Java, Madura and Bali.

The much anticipated Nusantara Tour Is back! Mission with higher targets, we introduce and bring AVK expertise and competency to Java and The Bali island.

“We have put together a very ambitious plan that will take a lot of coordination, determination, and relentless work to carry out” said Gert Borrits, Director of AVK Fusion Indonesia, with great passion and high enthusiasm.

This year’s plan follows the success of the first Nusantara Tour back in 2020, which was then targeting Sumatra Island and covered total of 9 cities.

This time, the Nusantara Tour is visiting Java, Madura and Bali. Java island, being the most populated island in Indonesia, will have our target of 5 times

the number of cities from our first Nusantara Tour.

The first stop of the Nusantara Tour 2022 was PT. Jababeka Infrastruktur which is located at Cikarang, Bekasi Regency, in West Java. This place is known for its global industrial area where large factories are housed.

The reason for selecting PT. Jababeka Infrastruktur as the first location, apart from being close to the national capital, Jakarta, is the ease of access. This made Cikarang the perfect pilot location for our success kick-start. It

also served as the benchmark for the following locations.

PT. Jababeka Infrastruktur was happy with our visit. We were warmly welcomed with great interest in wanting to expand their knowledge of AVK solutions. This was seen from the many questions posted during the presentation, both in the room and the show buses.

The Nusantara Tour involves also AVK's distributors in Jabodetabek, Banten, East Java and Bali. Together with our partners, we educate and share AVK Group's products and expertise we believe will bring great impact to the stakeholders.



Photo Location at Pt. Jababeka Infrastruktur, first stop of Nusantara Tour



"In today's ever evolving and challenging business environment, we believe it is who has most proximity to customers will win. This is what Nusantara Tour is all about " Gert Borrits, Regional Managing Director of AVK Southeast Asia.

The Nusantara Tour has made its way to the following water utility companies as at end July.



(A) Banten and West Java

- (1) Pt. Jababeka Infrastruktur
- (2) Pt. Krakatau Tirta Industri
- (3) PDAM Kota Cilegon
- (4) PDAM Kab. Cirebon
- (5) PDAM Kota Cirebon
- (6) PDAM Kab. Kuninga



(B) East Java

- (1) PDAM Bojonegoro
- (2) PTAB Jawa Timur (Perseroda)
- (3) PDAM Jember
- (4) PDAM Bangkalan
- (5) PDAM Sampang



(C) Bali

- (1) PDAM Denpasar
- (2) PDAM Badung
- (4) PDAM Gianyar
- (5) PDAM Tabanan

We started this event from 24 June - 4 July 2022 in Banten, and West Java. It was later restarted on 15 - 29 July 2022 in East Java and Bali.

Making this event is not easy at all, considering that geographically Indonesia is an archipelago country. Our bus crossed the Sea, and we encountered many obstacles on the road. However above all, this experience was extremely valuable because this is not something we can do often. Each province and city is different and has its own uniqueness regarding their water needs.

Some areas have used AVK products and some have not so it is an opportunity for us to work with water companies to build a better water quality supply and network. We come to get the ball directy to product marketing and branding. And the target is water utility companies. We are very grateful that the participants received us well and they also learned a lot of technical know-how from us. This activity will continue, with our next destinations Central Java and some of West Java that we have yet to visit.

We firmly believe the amount of effort and resources we invest in now will bring success in the long-term. It is simply because the rapport we have built with the stakeholders, and of course, the quality they can expect...from AVK.



PDAM Bojonegoro



PTAB Jawa Timur (Perseroda)



PDAM Jember



PDAM Bangkalan & PDAM Sampang



PDAM Denpasar



PDAM Badung



PDAM Gianyar



PDAM Tabanan



HOA LIEN WTP IN DA NANG CITY

VIETNAM



The expansion of the Hoa Lien Water Treatment Plant will help to increase the capacity of water supply for residents of Da Nang city, meeting the increasing demand for water resulting by growth from productions and tourism sectors. This will ensure safe water supply and prevent salinization in the dry season.

The project is a national key project and a part of the master plan in Da Nang's major developments.

Hawaco Central based in Da Nang was established in 2018 and after only a few projects, AVK Vietnam and Hawaco Central have established a great long-term partnership. AVK Vietnam provides Hawaco the optimal solutions and high quality AVK valves for distribution and projects in the region of Central Vietnam.

The expansion of the Hoa Lien Water Treatment Plant - the largest water treatment plant in Da Nang, is an important project in central Vietnam, and features the construction of a spillway on the Cu De River to source water, with a 727m² raw water pumping station, with a daily capacity of 120,000m³ and DN1400 raw water pipelines with a daily capacity of 120,000m³ to 240,000m³ of water. A 1.4m diameter and 10.616km long raw water pipelines will be placed underground, running from the pumping station in Hoa Bac Commune's Nam My Village to the water treatment plant in Hoa Lien Commune's Quan Nam 1 Village.

Ultimately, the expanded project will help to increase the capacity of water supply for residents of Da Nang city, thus meeting the increasing demand for water resulting by growth from productions and tourism sectors. This will ensure safe water supply and prevent salinization in the dry season.

End user: **Da Nang Construction Project Management Board (CPM)**

Customer: **Hawaco Central Joint Stock Company**

- 48 pcs x Manual flanged butterfly valve, fixed liner EVFS 75/20 DN50-1500
- 97 pcs x Electric flanged butterfly valve, fixed liner EVFS 75/20 DN50-1400
- 75 pcs x Flanged resilient seat gate valve S06/30 DN100-400
- 10 pcs x Swing check valve S41/21 DN50-200
- 9 pcs x Tilting disc check valve Fig.F221 S874/00 DN400-700
- 20 pcs x Double orifice air relief valve S851/48 DN100-200
- 3 pcs Sure anticipate/relief control valve Fig.961 S879 DN400

The project is a national key project and a part of the master plan in Da Nang's major developments.

With the support of AVK Group companies such as AVK International A/S, AVK Polska, Wouter Witzel Eurovalve, ACGMO Srl, etc., AVK Vietnam and Hawaco have developed the optimal solutions for the project. High quality AVK valves meet the strict technical specifications of the project, and can ensure quality in coastal climates and potentially saline water sources.

An important factor in the product evaluation for the project were the many certifications for drinking water by independent international organizations such as WRAS/ DVGW/ KIWA, which AVK valves have achieved. The project stakeholders were completely assured with our product quality in meeting optimal operation cost, minimizing water loss, and can rest assured that the water quality would not be polluted for residents and tourists in Da Nang city.

The dam had to be constructed between two rainy seasons in a very complex terrain. Therefore, to ensure the safety of the project, adjusting to the downstream is an extremely important matter. The construction of a raw water pipeline in a mountainous terrain entails many difficulties in the transportation of machinery, materials, and workers. AVK and HAWACO have been happy to support this important project and played a part in an essential development for the local community and the country.



AVK SERIES 36/80 JOINT-SUCCESS WITH MALE' WATER AND SEWERAGE COMPANY PVT.LTD. (MWSC)



AVK MALAYSIA

“With over 5,000 units of AVK Series 36/80 Gate Valve c/w PE-End installed at Maldives in the past 7 years, we have witnessed Male’ Water and Sewerage company Pvt.Ltd. (MWSC) commitment to supply quality water consistently with utmost excellence. AVK Malaysia is honoured to be a part of MWSC’s economic and sustainability growth over the years. Possibilities between MWSC and AVK are endless.”
Rasmus Martensen, Managing Director of AVK Valves Manufacturing Malaysia.



AVK Series 36/80 Gate Valve c/w PE-End Marked Joint-Success between MWSC and AVK Malaysia.

For over a decade now, AVK Series 36/80 Gate Valve with PE-end has been supplied, installed, and successfully operated in Maldives by MWSC.

MWSC is the pioneering organization in the Maldives for water production and wastewater management systems, diligently providing the people of Male’ with potable water and managing wastewater sustainably. At present it serves approximately more than 50% of the Maldivian population.

AVK, being the only selected partner for water works and wastewater valve to MWSC, has supplied numerous water network projects in Maldives, with customer categories stretched across domestic, commercial, and institutional. Among it, AVK Series 36/80 Gate Valve with PE-End has proven full integration to the design and build of water supply networks based on MWSC’s Water Resources Management approach. AVK Series 36/80 Gate Valve with PE-End, which is designed with built-in safety in every detail, manages to reduce the risk of leakage, while sustaining high durability and proven ease of installation which makes it the only choice throughout the years.

AVK Series 36/80 Gate Valve with PE-End is a fully welded pipe system up to Ø630 mm. It is fully vulcanized with AVK’s own drinking water approved EPDM



rubber compound. Featuring an outstanding durability due to the ability of the rubber to regain its original shape, the double bonding vulcanization process, and the sturdy wedge design. The triple safety stem sealing system, the high strength stem and the thorough corrosion protection safeguard the unmatched reliability. AVK's product quality answers to MWSC's promises to providing safe water that adheres to the standards set by Environment Protection Agency (EPA) in the Maldives.

"With over 5,000 units of AVK Series 36/80 Gate Valve with PE-End installed in the Maldives in the past 7 years, we have witnessed MWSC's commitment to supply quality water consistently with utmost excellence. AVK Malaysia is honoured to be a part of MWSC's economic and sustainability growth over the years. It is AVK's focus too, by ensuring access to water and sanitation for all and making cities safe, resilient and sustainable. Possibilities between MWSC and AVK are endless." Rasmus

Martensen, Managing Director of AVK Valves Manufacturing Malaysia.

In 2016, MWSC opened its flagship store in Male' city for the customers to experience first-hand the extensive products and services they can offer. The showroom features impressive high-end business products including water testing equipment, equipment for sewerage systems, RO Spares, PVC and PE pipes, along with various other water related products from different international brands. Here, MWSC being the sole distributor of AVK valves in Maldives, displayed and distribute an extensive product offering from AVK. MWSC is well stocked with AVK valves to cater for the entire of Maldives market.

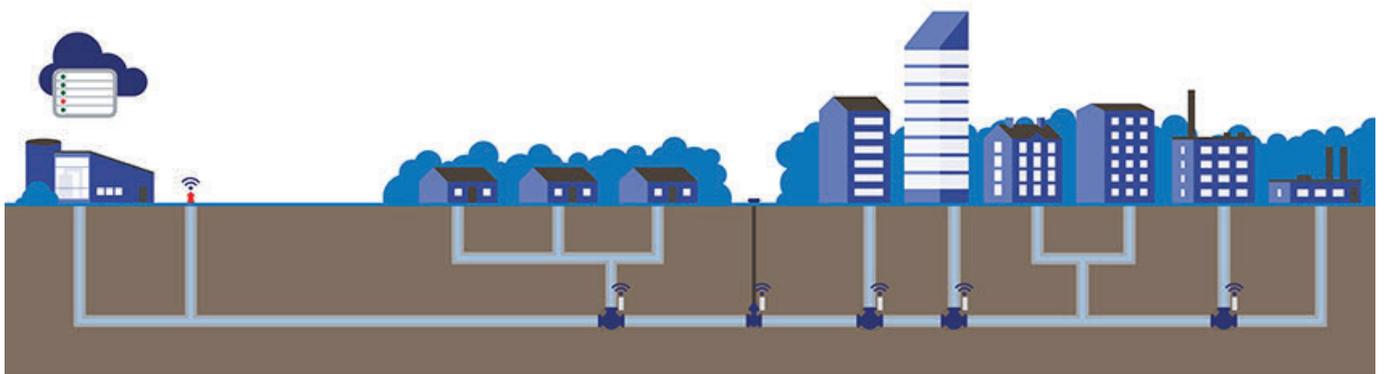
"It is at the core of MWSC to continue strengthening the foundations that makes our communities living a PURE life, and AVK has walked with us in making these milestones for the past 20 years. Today, MWSC has become a multi-disciplinary engineering and

manufacturing organization, as a visionary providing engineering solutions for integrated utilities and as a manufacturer of its own range of products. In business, I see shared values and commitments between MWSC and AVK – we never lose sight of what all were being built on, and never stop striving to supply our customers with value added services and safe water for everyone, always. With AVK, there are many new beginnings to build on. I am positive and looking forward to it." Says Mr. Hassan Shah, Managing Director of MWSC.

AVK Malaysia sees exponential growth in revenue from MWSC over the past 5 years, which marked great success despite the economy and supply chain challenges resulting from the COVID pandemic worldwide. We are very positive on the business journey with MWSC and seeing more collaboration in many years to come.



AVK SMART WATER DIGITALIZING WATER DISTRIBUTION NETWORK



It is our purpose to give water utilities the best circumstances to operate their distribution network. We do that by making it easier to collect valuable data from the network and deliver it in a way that suits the individual utilities' needs.



Inside the distribution network there are multiple measuring points, but because the assets such as fittings and valves are buried deep in the ground, it is difficult to know exactly how these assets are positioned, where they are and whether they are intact or damaged. The AVK Smart Water solution is a way for utility companies to monitor the condition and specific assets in the water distribution network.

The AVK Smart Water solution is a combined solution of both sensors and software. The IoT sensors collect and decode the data, and the software platform visualises complex data and turns it into valuable insights. The IoT sensors are designed to fit AVK core products such as gate valves, fire hydrants and AVK fittings. When installed, the sensors provide data directly from applications in the water distribution network and send the data

to the dedicated software platform.

AVK uses NB-IoT as the preferred communication technology because it is ideal for retrieving quality data from areas such as the water distribution network. NB-IoT can penetrate enclosed spaces such as wells, chambers, and other underground structures, but also because it uses the existing 4G infrastructure to communicate – the same as our smartphones. That way, it becomes much easier for utilities to deploy products without having to think about building a network to ensure data transmission.

AVK Smart Water IoT sensors are battery driven, thus flexible and easy to install. The sensors use wireless communication technology that enable them to send packages of data to the cloud and into a software platform. Packages of data are delivered directly

into the utilities' preferred IT system, we call it "API First" as our solution makes data from sensors available through an API that integrate seamlessly into the utilities' system.

The IoT sensors from AVK Smart Water include:

- >Pressure sensor
- >Flow sensor
- >Temperature sensor
- >Open/ close sensor
- >Level sensor
- >Fire hydrant cap sensor
- >Valve position indicator

In a nutshell, AVK Smart Water is a digital solution that collects and decodes data from the VIDI devices and converts it into understandable values. You can integrate data directly into your preferred IT-system or visualise it in AVK Smart Water's own platform VIDI Cloud.

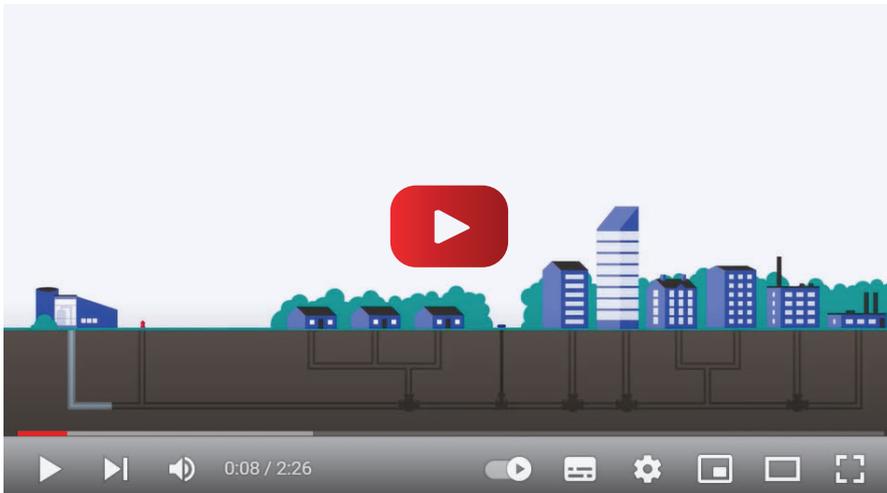
With sensors from the AVK smart Water solution installed across the water network, utilities are provided with more detailed insight about points in the network that were difficult to monitor before.

This article is taken from the AVK Group. Read more in depth contents here <https://www.avkvalves.com/en/gain-knowledge/smart-solutions/what-is-the-avk-smart-water-solution>

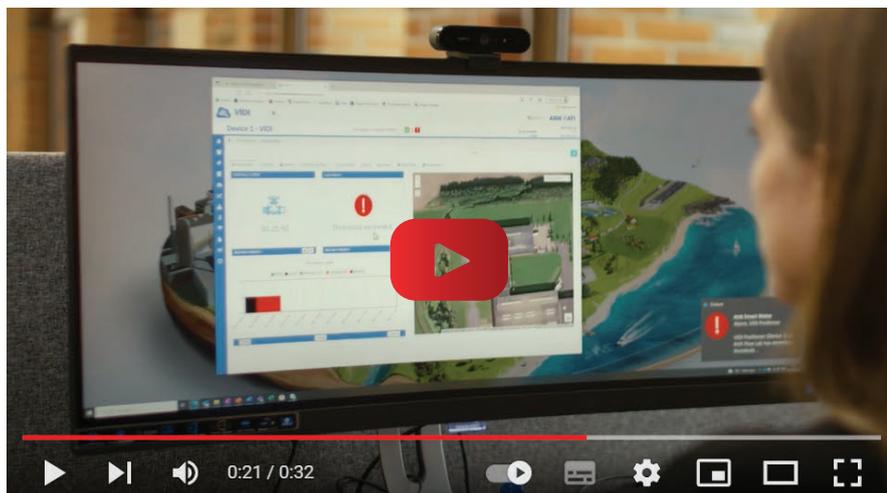
“The best way to predict the future is to create it”

Peter Drucker

[Click to watch >> What is the AVK Smart Water solution?](#)



[Click to watch >> Wireless monitoring with AVK Smart Water sensors](#)



[Click to download > Smart water, digital monitoring brochure](#)

TUAS SOUTH SINGAPORE LARGEST DESALINATION PLANT



SINGAPORE

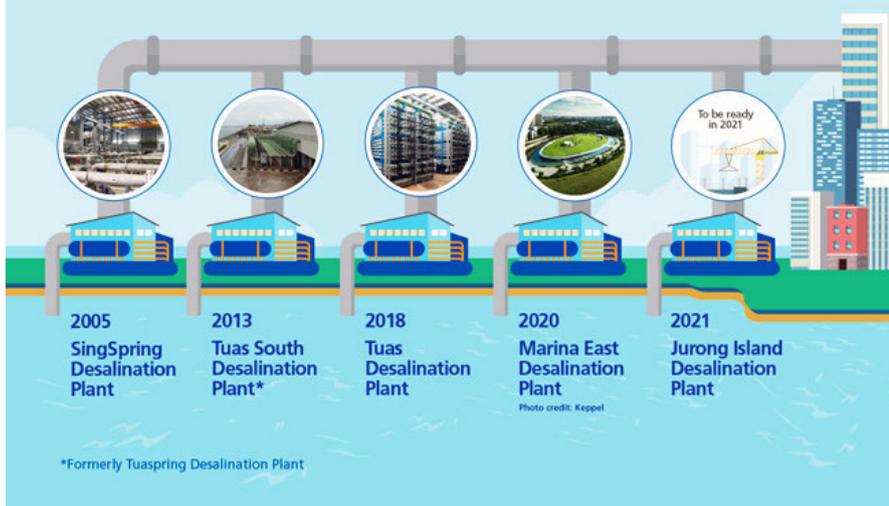


Desalination is an energy-intensive water source. Singapore is currently using reverse osmosis for its desalination, which uses about 3.5kWh/m³ of energy to make seawater drinkable. This process produces pure drinking water by pushing seawater through membranes to remove dissolved salts and minerals.

The Public Utilities Board (PUB) is constantly exploring ways to reduce the energy required to ensure the sustainability of desalinated water. PUB's goal is to reduce the energy requirement for desalination by more than half from the current 3.5kWh/m³ to 1.5 kWh/m³ and then to 1 kWh/m³ in the long run.

In Singapore's 50 years of independence, the country has turned its water vulnerability into a strategic asset by creating the Four National Taps – water from local catchments, imported water from Malaysia, NEWater and desalinated water – to diversify and

SINGAPORE'S DESALINATION JOURNEY



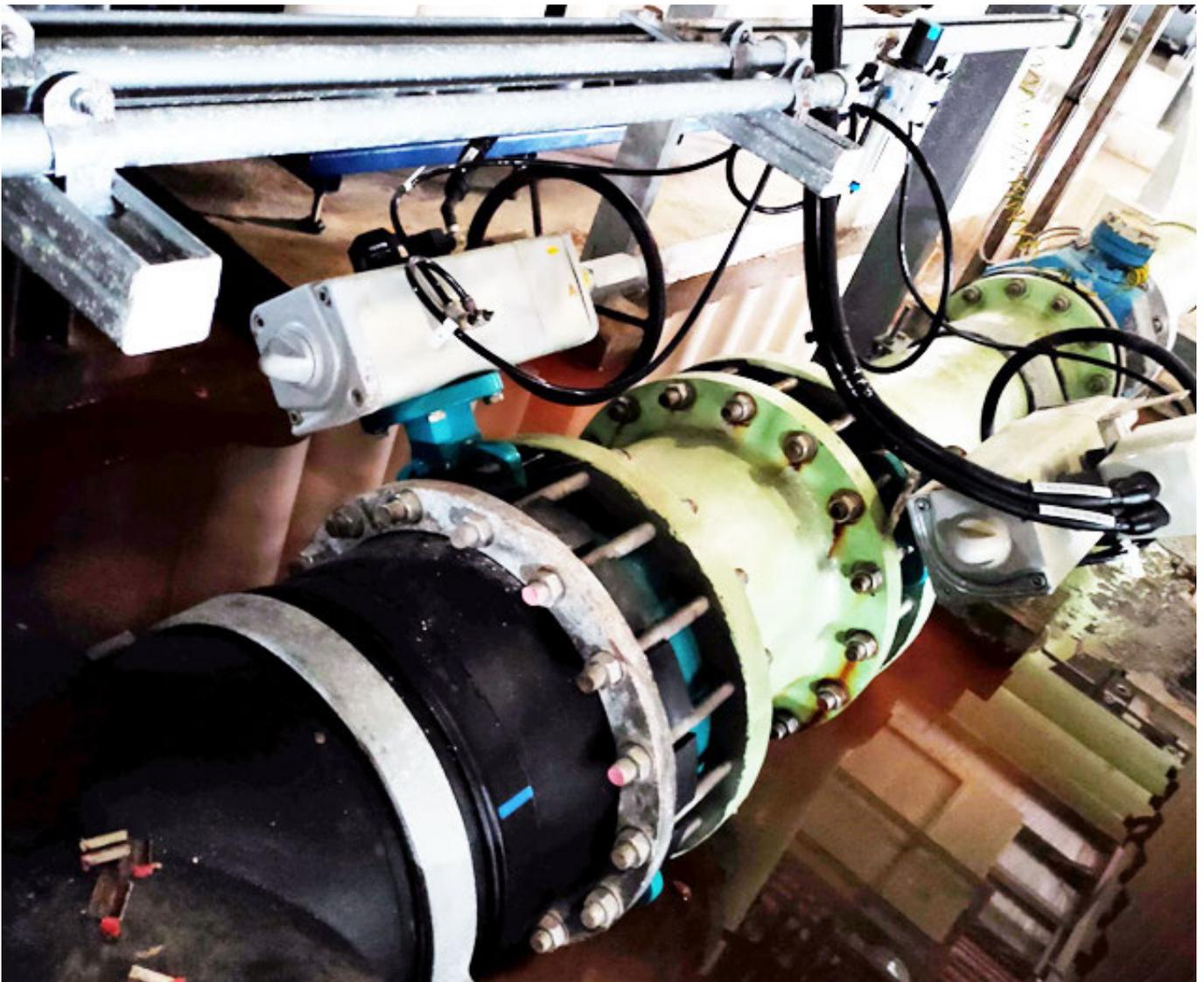
End user: **Singapore Public Utilities Board (PUB)**
Customer: **Memiontec Pte Ltd**
Project type: **Desalination Plant**
Project name: **Replacement of Membrane Filtration Systems at Tuas South Desalination Plant**
Application: **UF System /CIP System/ Backwash System/ Air Compressor System**

- 1140 PCS X InterApp Desponia wafer butterfly valves, DN 50 to 350, halar coated disc c/w festo pneumatic actuators
- 509 pcs x InterApp Desponia wafer butterfly valves, DN 50 to 350, halar coated disc c/w manual levers & gear boxes

strengthen its water supply. The technology investments in NEWater and desalinated water, two weather resilient sources that sailed the country through one of Singapore's driest periods in early 2014. Still, challenges lie ahead. As Singapore produces more water from desalinated seawater and NEWater, their energy needs for these treatment processes are also expected to rise. These issues will become more pressing as the population and economy continue to grow.

As the country forges ahead in the next 50 years, its vision is to ensure that the water supply continues to be robust, sustainable and affordable. In this instance, upgrading of the membrane filtration systems including the replacement of critical valves etc at the desalination plant is very crucial and having the right type of valve choices to suit the various systems makes a great difference to the end user in terms of the overall cost saving that they will be enjoying in the long run.

AVK Singapore in this instance, complying to the requirements of sea water application's valves - proposed the Halar coated disc material which best matched the applicaiton. We work very closely with the Public Utilities Board (PUB) as well as Memiontec Pte Ltd, the appointed contractor from the very beginning, on the required specifications for the valves, meeting all technical compliances as needed and through the detailed technical assistance rendered prior to the approval of our submission. Ultimately, the end user is totally convinced that the supply of Desponia Butterfly Valves c/w Halar Coated disc is their definite choice for high performance valves that deliver the best quality they have been looking for.



43rd PAWD NATIONAL CONVENTION 2022 “WATER GOVERNANCE TOWARDS BUILDING A BETTER NORM”

PHILIPPINES



As part of our participation in PAWD National Convention 2022, we assure that AVK Philippines will contribute and becoming a part of excellent water governance towards building a better normal for our country.

In June 2022, AVK Philippines Inc. joined the annual National Convention conducted by the Philippine Association of Water District (PAWD) and hosted by Metropolitan Cebu Water District (MCWD). It was held at Waterfront Cebu City Hotel and Convention Center in Lahug, Cebu City on June 15 - 17. There were more than 2,200 participants from water districts companies all over the country.

After almost 3 years of social slow-down caused by the Covid-19 pandemic, in Philippines, it is now allowed to make gatherings and events gradually but with the continuous safety protocols and social distancing while living in this time of “new normal”.

The said event has its theme “Water governance towards building a better normal”. It was attended by the water distributors and contractors from different parts of the country. The PAWD Convention also conducted activities such as product presentation



and seminars in regards to national water security, innovation and planning for a better normal. The main purpose of the event is to gather local and international companies to share and combine their expertise and knowledge that will become a big help for the improvement of water supply, especially now that we are facing the ever-increasing demand of water due to the increased population in the country.

AVK Philippines Inc’s booth was led by

Mr. Jojo Esguerra, VP & General Manager, Mr. France Posadas, Product Sales Specialist and Mr. Alexander Bangkok, Product Sales Manager. The event helps us to promote AVK’s affordable high quality products which help in our client’s projects. As part of our participation in PAWD National Convention 2022, we assure that AVK Philippines will contribute and becoming a part of excellent water governance towards building a better normal for our country.



“Water governance towards building a better norm”



AVK 360° PROJECT SOLUTION BUILDING LONG LASTING PARTNERSHIP MALAYSIA



AVK Malaysia has had the pleasure to finally meet up with 5 key water utility companies from 5 respective states of Peninsular (West) Malaysia from June to August, after the plan was put on hold due to the COVID pandemic. It was very exciting for us to fist bump with the stakeholders again! Nothing beats having face-to-face discussions on AVK product and success case stories with the end-users.

We concluded AVK 360 project solution with a 2-hour presentation - a thorough walk-through, from product applications, technicalities, certifications and warranty, as well as drawing attention on water challenges in Malaysia. Water is a scarce resource and, it is in AVK's DNA to commit to United Nations sustainable development goals with primary focus on clean water and sanitation to ensure access to water and sanitation for all. AVK's heritage and our footprints worldwide was shared also in the session - AVK Group is the world's leading, global manufacturer of valves with factories on all continents, incl. in Malaysia.

The one-day event was completed with 2 factories tour at AVK manufacturing plants located in Klang, Selangor.

Some sessions were fully conducted at AVK premises, some at hotel function rooms with bigger crowds, in central and north of the country. By whatever form it is, there is no way to deter us



from seeing our stakeholders. If you cannot come, we go to you!

From this round of events, we managed to reach a wider audience from across business sections and departments, that included planning and capital works, operational services, distribution, procurement, production, NRW, strategic, asset and contract management, corporate affairs, etc. Having them in one room made the sharing and exchange of ideas and solutions as well as product studies multi-dimensional. There were questions on many topics from the classroom, and even more “on-site” questions especially when walking around the factories.

We asked for each participant to register via the Google form from QR scan upon arrival. Data collected will

enable us to target marketing moving forward and to keep AVK’s partners updated with first-hand news.

Satisfaction is a rating; loyalty is the brand. Our vision in AVK Malaysia is creating and maintaining long-term partnerships.

Engagements with the end-user is and will continue to be, an on-going activity.

“Satisfaction is a rating; loyalty is the brand.”

Expect...long term partnership from AVK



WATER TREATMENT PLANT EXPANSION PROJECT HO DA DEN IN VUNG TAU

VIETNAM



The expansion of Ho Da Den Water Treatment Plant project is to increase the capacity of Ho Da Den Water Treatment Plant by 125,000 m³/ day. It is implemented to meet the annual growth of urban water using demand, at the same time target to attract investors, especially with the requirement to ensure water supply for projects widely implemented in one commune of Long Son Islet.



With a building acreage of 8 hectares, Ho Da Den Water Treatment Plant is the largest surface water plant built in Phuoc Hung ward, Ba Ria city. It had a total investment of around 300 billion Vietnam Dong (VND) in domestic loan and was completed within 2 years of construction.

The expansion of Ho Da Den Water Treatment Plant project is to increase the capacity of Ho Da Den Water Treatment Plant by 125,000 m³/ day. It is implemented to meet the annual growth of urban water using demand, at the same time target to attract investors, especially with the requirement to ensure water supply for projects widely implemented in one commune of Long Son Islet.

This is also the place where BWACO organizes extra-curricular trips and learning sessions for secondary schools students in the province to create awareness of protecting water resources for the environment and the future generations.

The project to expand the capacity of Ho Da Den Water Treatment Plant was approved with total estimation of VND 259 billion and was completed in September 2021, capacity of the entire Ho Da Den Water Plant then reached 225,000 m³/ day.



Ho Da Den Water Treatment Plant is taking on the role of BWACO's main production plant with a designed capacity of 110,000 m³/ day, along with Dinh River Water Treatment Plant with a capacity of 45,000 m³/ day. Currently, both water treatment plants are operating beyond their designed capacity to supply water to the population of Vung Tau city, Ba Ria city and Long Dien district.

AVK Vietnam and Duy Bao, with the support of AVK Group's member such as Wouter Witzel Eurovalve, ACMO S.r.l., had came up with optimal solutions as well as high quality AVK valve products to meet stringent technical requirements of the project.

End user: **Ba Ria – Vung Tau
Water Supply Joint
Stock Company
(BWACO)**

Customer: **D&B Technology
Service Trading Co., Ltd**

- 9 pcs x Wafer check valve ECV DN100-200
- 74 pcs x Electric wafer butterfly valve, fixed liner EVS 75/10, DN80-1200
- 1 pc x Electric U-section butterfly valve, fixed liner EVUS, DN1200
- 55 pcs x Manual wafer butterfly valve, fixed liner 75/10 EVS, DN80-600
- 10 pcs x Manual flanged butterfly valve, fixed liner 75 EVFS/EVUS, DN700-1200
- 6 pcs x Tilting disc check valve Fig.F221, DN600

After the project was appraised, approved and bid, BWACO selects contractors with full capacity and experience to implement the project. Accompanying BWACO in this project is Phuong Dong Infrastructure Investment and Consulting Joint Stock Company (project design consultant), No. 5 Construction Investment Joint Stock Company (the unit in charge of the construction bidding package), Saigon Water, Environment and Infrastructure Joint Stock Company (project constructing supervision consultant). In particular, the bidding packages for technology installation and automation was self-implemented by BWACO to reduce costs.

AVK Vietnam and our distributor, D&B, participated in consulting and proposing to BWACO to provide reliable, efficient and optimal valve solutions for the project, especially in the technology and automation installation bidding package. D&B Technology Service Trading Co., Ltd is our loyal distributor located in Ho Chi Minh city, Vietnam. With our key target in building long-term relationship with customers, AVK and D&B focus on providing the customers with full solutions instead of just products. D&B develops their influence in the market especially in Water Supply and Wastewater Treatment segments. They are supplying to various key customers across provinces in South Vietnam and Mekong Delta.

AVK high-quality valves with widely approved certifications for drinking water by independent international authorities such as WRAS/DVGW/KIWA, etc., is one of the key winning factor to our business. Our customers are completely assured and convinced by the product quality with optimal operation cost, in minimizing water loss, also especially with clean and sanitized water quality to fully meet the demand of safe and clean water for residents as well as water supply for coming projects to be implemented throughout the commune of Long Son Islet.



EXPERTISE ENSURES OPTIMAL INDOOR COMFORT SINGAPORE MASS RAPID TRANSPORT STATIONS

SINGAPORE



The major challenge for this project is to provide solutions that help to get the HVAC system working in the most energy efficient way. The solutions will need to meet the Green Mark Platinum rating for the development by the Singapore Building Construction Authority. Also, as an initiative of productivity, minimum workforce and labour at site need to be ensured.



SMRT Corporation is a multi-modal public transport operator in Singapore operating bus and rail services. A subsidiary of the Government of Singapore's Temasek Holdings, it was established on 6 August 1987 and listed on the Singapore Exchange from 26 July 2000 until 31 October 2016. It is one of the two major operators of Singapore's rail services along with SBS Transit.

The Thomson-East Coast Line (TEL) is a joint line between the Thomson Line and the Eastern Region Line. The 43km TEL will add 31 new stations to the existing rail network, with 7 interchange stations, which will link to the East-West Line, North-South Line, North-East Line, Circle Line and the Downtown Line. It is a 30% expansion of the network. Commuters can start enjoying the TEL in stages starting from 2019.

The major challenge was to provide a solution that helped get the HVAC system working in the most energy efficient way. In doing so, the solution would also meet another vital requirement by helping the owner to obtain the Green Mark Platinum rating for the development. The Green Mark Platinum rating system is developed by the Singapore Building Construction Authority to provide a recognised standard that would indicate the

environmental credentials of a building. As such, the rating system aims to improve the sustainability of Singapore construction industry. Also, as an initiative of productivity, minimum workforce and labour at site need to be ensured.

Key benefits of ICV's PIBCV to this project include:

1. Reduce installation time and practically no commissioning time. Requires no labor for balancing. Flow verification to be done through checking pressure differential across the valve at the index loop
2. Better flow accuracy - PIBCV flow is all pre-set at +/-5%, whereas manual balancing valve required balancing which normally range f 10-20%.
3. Phased / retrofitting works require no rebalancing- PIBCV will adjust automatically to maintain the required flow when new equipment is added, but manual balancing valve requires rebalancing as pressure differential across other valves will differ once one manual valve is adjusted.

End user: **SMRT Corporation**
 Customer: **Singapore Land Transport Authority (LTA)**

Project type: **22 New MRT Stations**

Project name: **Thompson Line Stage 1 to 3**

Application: **HVAC**

- 1,500 pcs x ICV Flowmaster PIBCV, for FCU & AHU, 25 - 50mm
- 60 pcs x ICV Flowmaster PIBCV, for FCU & AHU, 65 - 150mm
- 200 pcs x ICV Deltamatic MBV, for chiller and cooling tower, 100 - 300mm

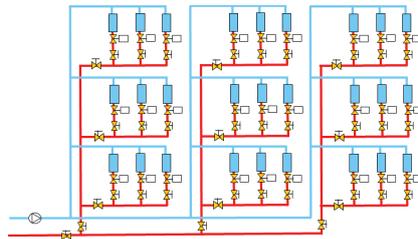
***PIBCV** – Pressure independent balancing control valve

***MBV** – Motorized ball valve

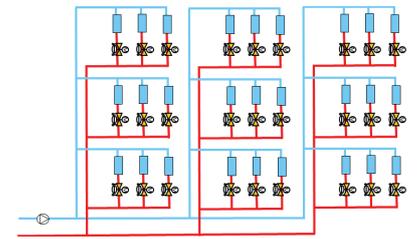
***FCU** – Fan coil unit. A device uses a coil and a fan to heat or cool a room without connecting to ductwork. Indoor air moves over the coil, which heats or cools the air before pushing it back out into the room.

***AHU** – Air Handling Unit. Used to re-condition and circulate air as part of a heating, ventilating and air-conditioning system.

ICV dedicated Engineering Support in Singapore worked closely with the contractor and owner to determine the optimal hydronic solution. ICV Pressure Independent Balancing & Control Valve was implemented into the system as shown below.



Manual balancing valve with two-way control valve



Pressure independent balancing and control valve



Photo from <https://www.smrt.com.sg/>



Photo from <https://www.smrt.com.sg/>

BEAT THE LEAKS WHAT IS WATER LOSS AND NON-REVENUE WATER?

Access to clean water is in many places taken for granted, just like the fresh air we breathe. We forget that clean water is a product, and that producing enough is actually a comprehensive, detailed process.

Vital resources and great efforts are wasted around us every second.

And resources are scarce. By adding inadequate distribution management, we are faced with a more invisible, yet crucial problem: water loss, also referred to as non-revenue water, or NRW.

Non-revenue water is basically produced, cleaned water which is lost

somewhere in the water distribution system, never reaching its final destination. This means water not used or paid for, affecting local economies as well as local resources available. The problem is universal, ranging from NRW levels of about 5 % to as much as 80 % in certain areas.

[A World Bank study puts the global estimate of physical water losses at 32 billion cubic meters each year, half of](#)

[which occurs in developing countries. Could these water losses be halved, it would be enough to supply around 90 million people.](#)

The reasons for water losses are many, ranging from leakages, pipe bursts, and poor water management to illegal connections and unauthorised consumption. But luckily, so are the available solutions - and their benefits.

10 steps to reduce water loss and non-revenue water:

1. Aim for efficient leakage recovery

Leaking pipes and equipment, due to bursts or breaks, is one of the primary causes to water loss. When a leak occurs, it can take days, weeks or even years before it is noticed, and localising the exact area in a huge, wide-reaching network is no easy task.

2. Divide the water network into sections

Dividing the supply network into separate sections, also referred to as district metering areas (DMA), is an efficient technique that makes it possible to obtain a valuable overview of what is going on below the ground. Water losses can then be calculated in the sections individually, and operators are able to better plan and prioritise their efforts.



[Click to watch >> 1 minute video illustrating how to section the distribution network](#)



3. Quick assessment and repair

By investing in a targeted leak detection program, it is in most places possible to reduce the overall leakage in the distribution system by at least 40–50%.

4. Monitor network activities

Leakages can easily be detected through noise loggers integrated in for example ground-level surface boxes. The loggers react to the sound of leaking water and enable operators to set in exactly when and where needed. By using the technique of district metering areas, it is also possible to measure and manage water pressure in the different areas of the water supply network.

5. Take control of the network pressure

Pressure management is considered the single most beneficial, important, and cost-effective leakage management activity. The higher the pressure, the more water lost through bursts or leakages.

6. Use all the available data, and think smart

Collecting and acting on data is very important when aiming for efficient management of a network. Valuable real-time data can be collected in various ways from the installed products throughout the water network, making it possible to obtain demand-driven management. [Understand more from page 14.](#)

AMIK NON-REVENUE WATER SOLUTIONS

VALUE IN EVERY DROP
STOP WATER LOSSES

Expect... **AVK**

[Click to download brochure >
Solutions to manage NRW](#)

AMIK REDUCES WATER LOSS

EXPECT
REDUCTION
OF COSTS

Expect... **AVK**

[Click to download brochure >
Solutions to reduce water loss](#)

7. Set an NRW limit, and follow up

Once the NRW is reduced to an acceptable level, the operations staff should set up a monitoring regime for the water balance for each DMA. Once the intervention limit is reached, the teams should be sent in to detect and resolve losses.

8. Look for ways to tackle illicit consumption

Applying the DMA structure is an efficient way to obtain overview of where illegal consumption takes place throughout the network. Also, there are practical ways to secure easy targets such as hydrants; the hydrant is able to set off an alarm message when the cover is opened.

9. Quality products and solutions

Based on all the above mentioned, it makes sense to stress the fact that high-quality products and solutions are the backbone in any efficient water system. The expenses and complications linked to choosing poor quality and easy fixes far exceeds the ones of an investment in a solid, well-planned solution.

10. Training and education

To assure a well-equipped water sector ready to meet the needs of tomorrow, we need to create good conditions for knowledge-sharing. Not only covers technical insights, but introduction of a greater, holistic view on water to the people who will become decision-makers, engineers, constructors and field workers etc. on future water projects. Every August, we host a Summer School in Låsby, Denmark, where students and representatives from all over the world come together to learn, share and expand their network.

AVK is part of several consortiums, including the LEAKman project which is a leakage management association of nine Danish water companies focusing exclusively on optimum leakage solutions.

This article is taken from the AVK Group. Read more in depth contents [here](#).

OUR PRODUCT BRAND

AVK ORBINOX VALVES FOR WATER TREATMENT

For over 50 years, ORBINOX - a highly recognized global leader, supplies a wide range of knife gate valves, special engineered knife gate valves and penstocks/slide gates for the water treatment industry.



With 6 manufacturing plants in Europe, the Americas and Asia, 12 sales companies and an extensive network of distributors worldwide, ORBINOX is currently present in over 70 countries across five continents. Orbinox's production plants are equipped with the most up to date machinery, combined with modular product design that allows high flexibility with specifications and delivery times.

Valve solutions for water treatment from Orbinox include: knife gate valves, penstocks and tilting disc check valves for multiple water applications such as:

- Water and waste water treatment plants
- Water and waste water pumping stations
- Sludge handling
- Storm tanks
- Desalination plants
- Irrigation systems



AVK VALVES SOLUTION FOR SEMICONDUCTOR MANUFACTURER GLOBALFOUNDRIES SINGAPORE



Semiconductor manufacturer GlobalFoundries is increasing its production capacity in Singapore with a hefty US\$4 billion (S\$5.4 billion) investment. The addition of a new fab, or manufacturing plant, comes amid global chips shortage.

The investment is in partnership with the Singapore Economic Development Board (EDB) and co-investments from its customers. The commitment here is among the largest in recent years, with the Republic attracting investments from multinational companies in the electronics, chemicals, and pharmaceutical industries.

The new fab, which is under

construction, will be located in its existing Woodlands campus and is expected to start production in January 2023. It is slated to reach full capacity by early 2024.

AVK Singapore had supported the contractors, which are Suez Water Technologies & Solutions Singapore Pte. Ltd., Topco Industries Pte. Ltd., and Yenn Dar Pte. Ltd. since tender stage with the right materials and specifications of the valves to secure all packages. Materials offered are in full compliance to the applications. These companies are reputable in the semiconductors industry, they involved in projects such as Micron as well. Product solutions offered by AVK

Singapore are for ultrapure water (UPW), Waste water and chilled water.

Ultrapure water (UPW), high-purity water/ highly purified water (HPW) is water that has been purified to an uncommonly stringent specifications.

End user: **GlobalFoundries Inc.**

Customer:

(1) Suez Water Technologies & Solutions Singapore Pte. Ltd.

(2) Topco Industries Pte. Ltd.

(3) Yenn Dar Pte. Ltd.

Application: **UPW, Wastewater, Chilled water**

- InterApp Desponia
- InterApp Bianca



Photo from GlobalFoundries Singapore

COME VISIT US!

AVK SOUTHEAST ASIA EXHIBITION Q3/22-Q1/23

Country	Exhibition	Date	Segment	Region	Audience
	<u>Indonesia Water & Wastewater Expo and Forum (IWWEF) 2023</u>	15 - 17 January 2023	Water & Wastewater	Jakarta, Indonesia	Water utility companies, contractors, engineers, consultant
	<u>Sarawak Water Supply Retreat (SWSR) 2022</u>	17 - 19 August	Water	Sarawak, Malaysia (East Malaysia)	Water authorities, Utility & tele- communications authorities
	<u>Borneo International Water & Wastewater Exhibition & Conference (BiWWEC) 2022</u>	17 - 19 October	Water	Sarawak, Malaysia (East Malaysia)	Water authorities, consultants, engineers, Agricul- ture & plantation, Industry analysts & conservation, environmentalist
	<u>Asia Water 2022</u>	7 - 9 December	Water	Kuala Lumpur, Malaysia	Water authorities, consultants, engineers, contractors
	<u>Water Environment Association of the Philippines 16th National Annual Convention (WEAP)</u>	21 - 23 September	Water	Manila (NCR, PH)	Water districts, contractors, engineers, environmentalist



2nd PSIM Hybrid National Convention 2022 (Pambansang Samahan ng Inhenyero Mekanikal)

6 - 8 October

Water & HVAC

Manila (NCR, PH)

Engineers, contractors



28th Philwater International Conference & Exhibition

19 - 21 October

Water

Clark Pampanga (Central Luzon, PH)

Water Districts, contractors, consultants, engineers



VietWater 2022

9 - 11 November

Water

Ho Chi Minh, Vietnam

Water Districts, contractors, consultants, engineers

AVK PHILIPPINES

NEW GENERAL MANAGER

From September 2022, Mr. Brian Steen Hansen is appointed AVK Philippines general manager, with retirement from Mr. Jojo L. Esguerra who has been with the company for 18 years.

Mr. Jojo's leadership at AVK has brought company success and winning in most of the tender specifications. His strong commitment and hard work for business development has made AVK a competitive brand in the Philippines especially in the water supply industry. We wish Mr. Jojo a happy retiring life with adventures and new height!

Mr. Brian Steen Hansen was born and raised in Sorø, Denmark and is now residing in Manila. Brian has a Bachelor degree in Science Management and Production Technology from DTU, Denmark. He started his career in Copenhagen before heading to China for 14 years. In China, Brian earned

extensive experiences from setting up a Danish wind turbine company from ground before he became a plant manager for Alfa Laval in Qingdao. In 2020, Brian moved to Romania with a managing director role for a Danish company.

"On 5th September I had great pleasure in joining AVK as General Manager for AVK Philippines. I am very excited and proud to join AVK, and to have the opportunity to work with all the fantastic people in the company and especially in the Philippines. AVK is a global market leader within their segments, and together with the team in Philippines, I will do my outmost to ensure that we also become the preferred partner for all potential clients here. AVK Philippines has a very strong position and brand in certain segments, but there is still a huge potential for us in other

segments where the Philippines is experiencing huge growth and development. So, I am very much looking forward to a fantastic and exciting future with the team here in the beautiful "Land of the Smiles" Mr. Brian Hansen.

Let's join hands to welcome Brian to the AVK family.



AVK INDUSTRIAL

VALVE SOLUTION PROVIDER FOR THE INDUSTRY

AVK Industrial solution is a combination of passion and competencies across industries and segments, consisting of trusted brands, application knowledge and expertise within automation.

With over years of operation in the industry, AVK has acquired Nationally and Internationally recognized brands that are now part of the AVK Group and contribute to our product packages. The companies in AVK Industrial include InterApp, Wouter Witzel, ICV, TEC artec, OMV-INDOIL and many other. They offer comprehensive product ranges and advanced technologies under their own strong brand recognition.



InterApp

A Swiss company with its headquarters in Rotkreuz, operates its own research and development as well as manufacturing, assembly and testing facilities in Switzerland and Spain. With over 40 years of experience, InterApp sets the exclusive technology standard for valves and fluid technology.



Wouter Witzel

The Dutch business Wouter Witzel has been a top supplier and leading manufacturer of premium butterfly valves and actuators for 40 years. This product is used in pipelines as shut-off valves, control valves and non-return valves. Various manual control devices, actuators and accessories are available for specific conditions.



Orbinox

With operations in over 70 countries and more than 45 years of expertise designing, producing, and distributing knife gate valves, penstocks, dampers, and hydraulic valves, ORBINOX is one of the top manufacturers of knife gate valves in the world.



ICV

Specializes in providing high-quality, exceptionally long-lasting valves and other equipment for HVAC and construction applications.



TEC artec

TEC artec GmbH is an experienced high pressure and high temperature valve manufacturer in the power generation and oil and gas industry. They design and manufacture gate valves and ball valves with shut-off and control functions as well as desuperheaters and turbine bypass valves to control steam temperature and pressure according to the needs of the customer.



OMV-INDOIL

With its headquarters in Zagreb, the Croatian valve manufacturer has more than 30 years of expertise manufacturing high-performance ball and butterfly valves in a variety of materials. The business gives regional contractors access to a variety of customized valves and project capabilities.



AC.MO

AC.MO designs and manufactures hydraulic equipment for water distribution, water transmission, irrigation and water treatment. AC.MO's manufacturing capacity and cutting-edge design are made available to all of our institutional and technological partners, supporting their excellence.



CYL

Founded in 1990, CYL Knife Valves is today a well-known company with 25 years of experience designing, manufacturing and selling knife gate valves. CYL goods are available in more than 50 nations thanks to a global network of agents and distributors.



Glenfield

Market leaders within the field, have been designing and manufacturing specialist engineered valves and penstocks for +160 years. Glenfield offers some of the best extended warranties in the industry. The business specializes in designing and maintaining big dams, reservoirs, and hydropower projects, as well as providing flood defense systems.



Premier Valve

The Premier brand is well established in the water industry delivering quality products to the local market for over 60 years in water transmission lines, dams, reservoirs, hydropower and cooling water for coal power stations.



Hydro-Cos

Tailor made solutions for pipelines since 1991, Hydro-cos product ranges include repair collars, couplings, special pieces and tailor made solutions for pipelines. With more than 30 years of experience in design and manufacturing, Hydro-Cos is a first class know-how brand and a reference for the market.



Fusion Group

Fusion Group Limited was founded in 1971 and pioneered polyethylene pipe jointing in the UK as well as across the globe. Fusion became a member of the AVK Group of Companies in 2017.



VCW

The Brazilian company specializes in flow retention in basic/ industrial sanitation, water and wastewater treatment markets, and offers a variation of butterfly valves and check valves in different materials and characteristics for numerous types of applications.



Donkin

Donkin gas valves and fittings have been used in the worldwide gas industry for over 170 years and are suitable for all types of pipe systems. Donkin have manufacturing facilities in Chesterfield in the UK.

REACH US!



AVK FUSION INDONESIA



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Selatan, Banten 15314, Indonesia



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AVK VIETNAM CO. LTD.



So 19 So 1D, Khu dân cu Trung Son,
Bình Chánh , Thành pho Ho Chí Minh, Vietnam





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