



AVK GROUP



Sales companies

Sales and production companies



AVK Denmark

AVK UK is part of the globally renowned AVK group who are based in over 85 countries and are known as one of the leading innovators and manufacturers of high quality valves and fittings for the water, waste water, fire fighting and gas industries worldwide.

Our product specialists carry out design and development in our state of the art technology centre in Denmark while sales and distribution are handled by local AVK sales companies, agents and distributors worldwide.



Design Department

Only by listening to our customers, will we be able to live up to the market expectations and we value the importance of local customers being serviced by local sales organisations. Customer feedback, local market intelligence, component quality and environmental considerations are at the forefront of our design processes. In cooperation with the end user, new products are field tested before the final market launch, thus achieving the best result in individual markets.

Within the AVK group is AVK GUMMI which produces all the rubber used for AVK products and are known as one of the world leaders in rubber technology.

These considerations ensure that AVK are, at all times, pro-actively providing technically advanced products. Our products comply with, and often exceed, the highest standards of safety and durability and are in accordance with all common national and international standards such as BS, EN, ISO, CEN, DIN, GB AWWA, JWWA and many more.



AVK GUMMI













WIMES Compliant























AVK UK MANUFACTURING AND SALES





AVK Donkin, Chesterfield



Invicta, Maidstone

AVK Aqua-Gas Manufacturing, Corby



AVK UK Head Office, Northampton



AVK Syddal, Hyde, Manchester





Glenfield, Prestwick



Orbinox, Bognor Regis

AVK UK have manufacturing sites in Corby, Chesterfield, and Hyde, Greater Manchester. These are supported by sales and marketing in Chesterfield, Northampton, Prestwick, Warrington and distribution centres in Chesterfield, Corby, Maidstone and Bognor Regis.

With local technical expertise and on-site service teams, AVK UK also offers its customers product identification, diagnostics, selection and application advice. We also hold product training courses and operating & maintenance guidance.

All AVK customer facing staff hold the relevant Site Safety Passport and where necessary confined space and other relevant certification. AVK in the UK has a 24/7 emergency same day leak repair clamp service for gas and water mains.

From our facility at Hyde we offer either a same day, next day, 2 to 3 day service or a delivery to suit your requirement, via our dedicated

24 HOUR EMERGENCY LINE 0800 202 8228

AVK, through Invicta Valves now offer full Site Solutions to support our unrivalled water and waste water product range.

We provide all customers' needs ranging from inspection, site surveys, design, supply, installation, commissioning and maintenance. We even provide supplementary electrical and small civil engineering installation services when required. This service is supplied from 3 locations across the UK, for more information see page 13 in this brochure or contact us on: **T: +44 (0) 1622 754613**

E: sitesolutions@invictavalves.co.uk

This brochure gives a general overview of our extensive Air Valve product range, however if you cannot see the product, size or standard that you require or would like information on training and site services please contact us on:

Water sales office

+44 (0) 1604 601188

or visit our website www.avkuk.co.uk

AVK AIR VALVES, INNOVATIVE DESIGN FOR TOP PERFORMANCE



AVK UK offer a range of water and waste water air valves with a solid pedigree that stretch back over 40 years.

The Air valves are installed in virtually every country in the world, providing bespoke solutions to various air management projects.

The correct air valve use provides protection from transit pressures and entrapped air in pipelines, the main causes for the bursting, collapsing, and fracturing of pipelines. These negative effects on the pipeline assets can be directly associated with reduced pipeline efficiency, premature failure and reduced whole life costs.

A.R.I Flow Control Accessories, working in partnership with AVK UK has developed an extensive range of products applicable to the water and waste water industries along with specialized software for pipeline analysis. Ongoing research and development, responding to customer feedback, results in continual product development and improvements.

The AVK offer includes commitment to service that has won the confidence and loyalty of customers worldwide and provides:

- Established quality of design through build and testing
- Fully compliant with British Standards and WRAS approvals
- Pressure ranges from 0.05 bar to 100 bar; MOP
- Customer support incorporating project analysis, product selection and technical application
- Efficiencies in pipeline operation, including
 - Energy savings 20%+
 - Improving asset life
 - Reduction in leakage
 - Maximising pipeline performance
 - Ongoing product development











WASTE WATER AIR VALVE DESIGN

An innovative design with a large air gap between liquid and sealing system ensures top performance, even when used with an impure or particularly aggressive medium.

The valve combines large volume air discharge/ intake whilst filling/draining a pipeline, with automatic release of air/gas liberated from the fluid.

Other design features and benefits

- Funnel-shaped lower body prevents accumulation of deposits at the bottom of the valve.
- Spring between the stem and upper float compensates for slight pressure changes in the line and maintains the air gap.
- Large orifice in the automatic valve releases large volume of air or gas when the line is under pressure.
- Lightweight construction offers easy handling.
- Drain in the valve's side gives possibility of drainage and flushing from external clean water source.
- Stainless steel and polypropylene float system provides high corrosion resistance.
- Threaded opening on top of air valve enables mounting of exhaust pipe and odour control.
- Low sealing requirement, 0.05 bar.

During the charging of the line, air is released at a high flow rate through the orifice of the kinetic valve until the line is full.

During normal operation the kinetic orifice remains closed, and the automatic orifice releases trapped air in the line.

* The spring prevents unnecessary opening of the automatic valve, thus the water level will not rise up to the sealing system and discharge into the open.

During emptying of the line, the kinetic orifice admits air at a high flow rate to prevent vacuum damage to the system.







Freely dissolved air exists in all fluid transmission systems.

The principal sources for this air are:

- Incomplete filling of the line which leaves air pockets in high places and in different accessories.
- 2. Air dissolved in the fluid that is released when the pressure drops and/or there is a rise in temperature.
- 3. Vortexes in the fluid, at the points where it is pumped, introduce air into the system.
- 4. Air is sucked into the system through openings and accessories.

The lack of control over the air present in a fluid system can result in damage:

- 1. If destructive vacuum conditions are created.
- 2. The presence of air can have a detrimental effect on system drainage efficiency.
- Reduced air pockets in the system cross sectional area, higher energy losses, tremors in the systems and in extreme conditions; the entire stoppage of flow.
- 4. High pressure surge.
- 5. Metal parts in the system and system accessories corrode at higher rate.
- 6. Lower pumping efficiency.
- Physical risk when large volumes of air under pressure are released at high velocities.
- 8. Inaccuracies in the measurement of fluid volumes.
- 9. Accelerated wear of moving parts and flow gauges.
- 10. Cavitation damage.

Control of air in potable water systems using air valves supplied by AVK UK

There are many types of air valves installed in potable water supply systems: air and vacuum, automatic air release and combination (double) valves.

Air and Vacuum valves discharge large quantities of air from non-pressurised pipes and are used mainly when filling a line. Air and vacuum valves also make it possible to admit large quantities of air when lines are drained and when the pressure drops suddenly. Air and vacuum valves are also known as: kinetic valves, large orifice air valves, vacuum breakers, low pressure air valves and air relief valves.

Automatic air release valves continuously release relatively small quantities of air from a pressurized line. The automatic air release valve is also known as a small orifice air valve and as a pressure air valve.

Combination air valves fulfil the tasks required of both types of valve - air and vacuum and automatic. They discharge or intake large volumes of air when filling or emptying a system and continuously release small volumes of air when the line is pressurised.

Combination air valves are also known as double orifice air valves, double acting or dual orifice.

Note: See AVK back to basics for more details



CUSTOMER PROMISES

Our unique selling propositions enable us to give eight important promises to our customers:

EXPECT SOLUTIONS, NOT ONLY PRODUCTS

EXPECT GLOBAL LEADERSHIP AND LOCAL COMMITMENT

EXPECT QUALITY IN EVERY STEP

EXPECT PROMPT RESPONSE

EXPECT LASTING INNOVATIONS

EXPECT TOTAL SAVINGS

EXPECT A LONG-TERM PARTNERSHIP

EXPECT IT TO BE EFFECTIVE AND EASY

When choosing a supplier, our size, competence and expertise should give our customers higher expectations.



AIR VALVES - WATER

SERIES NUMBER	SERIES 701/10	SERIES 701/13	SERIES 701/30
DESCRIPTION	AVK SINGLE ORIFICE Composite Material Air Relief Valve, PN16	AVK SINGLE ORIFICE AIR RELIEF VALVE, PN16	AVK LARGE SINGLE ORIFICE AIR RELIEF VALVE, PN16
APPLICATION	For use with potable and filtered raw water.	For use with potable and filtered water.	For use with potable and filtered water.
MAIN FEATURES	 Air release capability 10 times greater than a conventional valve. 300 gms. weight. Reinforced nylon body. Rolling seal. 	 Air release capability 10 times greater than a conventional valve. 1.7 Kg weight. Grey cast iron body, DZR brass base. Rolling seal. 	 Releases large volumes (m³) of air from pipelines up to 0.9 Bar. Lightweight design. Corrosion resistant construction.
MAIN OPTIONS	 DN50 or 80 NP 16 mounting flange. Isolating DZR brass ball valve. 1/8" BSP nipple outlet. Ductile iron body - 701/13. 25 bar Ductile iron version - 701/12. Vented non-return valves. Low pressure options. Test point. 	 DN50 or 80 NP 16 mounting flange. Isolating DZR brass ball valve. 1/2" BSP nipple outlet. 25 bar ductile iron version - 701/12. Composite material version - 701/10. Vented non-return valves. Low pressure options. Test point. 	 Butterfly isolating valve 2" – 12" sizes. Isolating gate valve with bevel gearbox. Isolating ball valve 2" & 3"size only on BSP inlet. Available to PN25 and PN40. Test point. Non-slam facility. Vented non-return valves. Low pressure options.
	DN ½", ¾",1"	DN ½" ¾",1"	DN50-300
MAX WURKING PRESSURE	16 Bar. (1.6 mpa)	16 Bar. (1.6 mpa)	16 Bar. (1.6 mpa)
BODY MATERIAL	(temporarily up to 90°C) Glass Reinforced Nylon	(temporarily up to 90°C) Cast Iron BS EN 1561, GJL-HB-195	(temporarily up to 90°C) Ductile Iron ASTM A536 Gr. 60-40-18
APPLICABLE STANDARDS	EN 1074-4	EN 1074-4	BS EN 1092-2:1997 EN 1074-4
PRODUCT PICTURE	WRAS	WRAS	WRAS

SERIES 701/40

AVK DOUBLE ORIFICE COMPOSITE MATERIAL AIR RELIEF VALVE, PN16

For use with potable and filtered water.

- Large orifice will discharge air to over 1 bar pipeline pressure.
- Small orifice 10 times more efficient.
- Suitable for pipelines up to and including DN350.
- Reinforced nylon body.
- DN50 or 80 PN16 mounting flange.
- Isolating DZR brass ball valves.
- Vented non-return valve.
- Ductile iron body.
- Low pressure options.
- Test point.

DN 1/2", 3/4", 1", 2" inlet

16 Bar. (1.6 mpa)

-10°C max. 60°C (temporarily up to 90°C)

Reinforced Nylon

EN 1074-4



SERIES 701/40L NEW **AVK DOUBLE ORIFICE AIR RELIEF VALVE. PN16**

For use with potable and filtered water.

- Working pressure range 0.05 bar to 16 bar.
 - Releases large volumes of air (300 m3/hr) of air from pipelines up to 16 bar.
- Discharge from the small orifice is 10 times greater than conventional units.
- Corrosion resistant construction.
- Suitable for use with small suspended scuds.
- Ball valve isolating. .
- Optional test point.
- Reinforced nylon construction.
- Non-slam options.

•

WRAS

- Duplex and SS body material options.
- Low pressure, 0.02 to 10 bar option.

DN15, 20, 25, 50

16 Bar. (1.6 mpa)

-10°C max. 60°C (temporarily up to 90°C) Reinforced Nylon

SERIES 701/43 NEW AVK DOUBLE ORIFICE

AIR RELIEF VALVE. PN16

For use with potable and filtered water.

- Working pressure range 0.1 bar to 16 bar.
- Releases large volumes of air (450 m3/hr) of air from pipelines up to 16 bar.
- Discharge from the small orifice is 10 times greater than conventional units.
- One piece, lightweight design. Corrosion resistant construction.
- Ball valve isolating. •
- Optional test point.
- Reinforced nylon construction.
- Non-slam options.
- DI and SS body material options.

DN50

16 Bar. (1.6 mpa)

-10°C max. 60°C (temporarily up to 90°C)

Reinforced Nylon



SERIES 701/46 NEW **AVK DOUBLE ORIFICE AIR RELIEF VALVE. PN16**

For use with potable and filtered water.

- Working pressure range 0.1 bar to 16 bar.
- Full bore.
- Releases large volumes of air (2000 m3/hr @ Dn80) of air from pipelines up to 16 bar.
- Discharge from the small orifice is 10 times greater than conventional units.
- One piece, lightweight design. Corrosion resistant • construction.
- Butterfly Isolating valve. .
- Isolating gate valve with bevel gearbox.
- Optional test point. •
- Reinforced nylon construction. •
- Non-slam options.

DN50, 80, 100

16 Bar. (1.6 mpa)

-10°C max. 60°C (temporarily up to 90°C)

Ductile Iron Epoxy Coated





AIR VALVES - WATER

SERIES NUMBER	SERIES 701/50	SERIES 701/60	SERIES 701/84
DESCRIPTION	AVK DOUBLE ORIFICE AIR RELIEF VALVE, PN16 For use with potable and filtered	AVK COMBINATION AIR VALVE FOR HIGH FLOW	AVK COMBINATION AIR VALVE WITH UNDERGROUND CHAMBER
	water.	water.	water.
MAIN FEATURES	 Releases large volumes (m³) of air from pipelines up to 0.9 Bar. Discharge from the small orifice is 10 times greater than from conventional units. Lightweight design. Corrosion resistant construction. 	 Working pressure range 0.2 -16 Bar. Test pressure for the air valve is 1.5 times its working pressure. Aerodynamic design enables high in flow rates and controlled outflow rates of air. Reduction in water hammer. 	 Working pressure range 0.2-16 Bar. Test pressure for the air valve is 1.5 times its working pressure. Integral isolating valve. Insulated chamber. Suitable for pipelines upto and including DN350.
MAIN OPTIONS	 Butterfly isolating valve. Isolating gate valve with bevel gearbox. Test point. Cast iron small orifice. Non-slam facility. PN25 versions. Vented non-return valves. Low pressure options. 	 Butterfly isolating valve. Isolating gate valve with bevel gearbox. PN25 and PN40 available. Low pressure options. Non-slam. Chambered option. 	 Non-slam device. BSP threaded inlet. 0.1 bar pressure. Variable lengths. Corrosive fluid options. Insulation.
SIZE	DN50-300	DN50-250	DN50-100
MAX WORKING PRESSURE	16 Bar. (1.6 mpa)	16 Bar. (1.6 mpa)	16 Bar. (1.6 mpa)
TEMPERATURE RANGE BODY MATERIAL	-10°C max. 60°C (temporarily up to 90°C) Ductile Iron BS EN 1561 GJL-HB-195	-10°C max. 60°C (temporarily up to 90°C) Ductile Iron	-10°C max. 60°C (temporarily up to 90°C) PVC / Reinforced Nylon
APPLICABLE STANDARDS	BS EN 1092-2	EN 1074 - 4 EN1092-2 (ISO 7005-2)	BS EN 1092-2
PRODUCT PICTURE	WRAS	WRAS	WRAS



AIR VALVES - WATER WATER

SERIES NUMBER	SERIES 701/33	SERIES 701/70	SERIES 701/73
DESCRIPTION	AVK LARGE SINGLE ORIFICE AIR RELIEF VALVE, PN16	AVK COMBINATION AIR RELIEF VALVE, PN 16	AVK AUTOMATIC AIR RELIEF VALVE, PN16
APPLICATION	For use with neutral liquids (sewage).	For use with neutral liquids (sewage).	For use with neutral liquids (sewage).
MAIN FEATURES	 Releases large volumes (m3) of air from pipelines up to 0.5 Bar. Lightweight design. Corrosion resistant construction. 	 Working pressure range: 0.2 – 16 bar The conical body with funnel- shaped lower body allows maximum air volume and prevents accumulation of deposits at the bottom. Mild steel epoxy coated body. 	 Under 17kg in weight. Drainage and flushing bosses. Small orifice discharge 10 times greater than conventional units. Reduction in hammer and surge in systems. Highly corrosion resistant. Mild steel epoxy coated body.
MAIN OPTIONS	 25 Bar option. BSP threaded inlets. One way out only. Vacuum breaker, one way in. Non-slam options. 	 Isolating gate valve with bevel gearbox. Low pressure options. Non-slam. Chambered option. Odour control units. 	 Isolating gate valve. Bevel gearbox. DZR brass ball drain valve. Threaded outlet. Odour control units. Chambered option.
SIZE	DN80-100	DN50-200	DN50-200
MAX WORKING PRESSURE	16 Bar. (1.6 mpa) 25 Bar option	16 Bar. (1.6 mpa)	16 Bar. (1.6 mpa)
TEMPERATURE RANGE	-10°C max. 60°C	-10°C max. 60°C	-10°C max. 60°C (temporarily up to 90°C)
BODY MATERIAL	Steel Body, Epoxy Coated	Steel Body, Epoxy Coated	Steel Body, Epoxy Coated
APPLICABLE STANDARDS	EN 1074-4	EN1092-2 (ISO 7005-2)	BS EN 1092-2:1997
PRODUCT PICTURE		F	

0Å

12 AIR VALVE SOLUTIONS

0

SERIES 701/75

AVK SQUAT COMBINATION AIR RELIEF VALVE, PN10

For use with neutral liquids (sewage).

- Under 8kg in weight.
- Reinforced nylon construction.
- Drainage and flushing bosses.
- Small orifice discharge 10 times greater than conventional units.
- Inlet flange connection.
- Height 470mm.
- Non-slam device.
- BSP threaded inlet.
- Isolating knife / ball / gate valve.
- Bevel gearbox.
- 0.1 Bar sealing option.
- Odour control units.
- Chambered option.

DN50-100

0.2 – 10 bar

-10°C max. 60°C (temporarily up to 90°C)

Reinforced Nylon

EN1092-2 (ISO 7005-2),



SERIES 701/78

AVK COMBINATION AIR VALVE FOR HIGH FLOW, PN16

For use with neutral liquids (sewage).

- Working pressure range: 0.2 16 bar
- The conical body with funnelshaped lower body allows maximum air volume and prevents accumulation of deposits at the bottom.
- Mild steel eopxy coated body.
 - Full bore outlet.
 - Non-slam device.
 - BSP threaded inlet.
- Isolating knife / ball / gate valve.
- Chambered option.
- 0.1 Bar sealing option.Odour control units.
- PN25 version.

DN50-200

0.2 - 16 Bar. (1.6 mpa)

-10°C max. 60°C (temporarily up to 90°C)

Mild Steel

BS EN 1092-2



SERIES 701/79

AVK UNDERGROUND AIR VALVE, PN10

For use with neutral liquids (sewage).

- Reinforced nylon air valve construction.
- Drainage and flushing bosses.
- Small orifice discharge 10 times greater than conventional units.
- Inlet flange connection.
- Integral isolator.
- Air valve and isolator encapsulated.
- Non-slam device.
- BSP threaded inlet.
- 16 Bar medium and high performance.
- 0.1 and 0.05Bar sealing option.
- Variable height in chamber.
- Odour control units.

DN80

0.2 – 10 bar

-10°C max. 60°C (temporarily up to 90°C)

Reinforced Nylon

EN 1074-1 and 4, EN 12266. BS EN 1092-2



SERIES 701/89

AVK UNDERGROUND AIR VALVE, PN16 HIGH PERFORMANCE

For use with neutral liquids (sewage).

- Working pressure range 0.2 bar to 16 bar.
- Releases large volumes of air (2000 m3/hr) of air from pipelines up to 16 bar.
- Discharge from the small orifice is 10 times greater than conventional units.
- DI epoxy coated body.
- Inlet flange connection.Integral isolator.
- Integral isolator.
 Air valve and isolator
- encapsulated.
- Non-slam option.

•

- 3" BSP threaded inlet.
- 0.1 bar sealing option.
- Variable height in chambers.
- Odour control units.
- SS air valve body material option.

DN80

16 Bar. (1.6 mpa)

-10°C max. 60°C (temporarily up to 90°C)

Ductile Iron Air Valve; PVC Chamber



AIR VALVES - WASTE WATER

SERIES NUMBER	SERIES 701/95	SERIES 701/9		
DESCRIPTION	AVK DOUBLE ORIFICE AIR RELIEF VALVE, PN16 RELIEF VALVE, PN			
APPLICATION	For use with neutral liquids (sewage).			
MAIN FEATURES	 Working pressure range 0.05 bar to 16 bar. Releases large volumes of air (300 m3/hr) of air from pipelines up to 16 bar. Discharge from the small orifice is 10 times greater than conventional units. Lightweight design. 6.9kgs in weight. Corrosion resistant construction. 	 Working pressure range: 0.2 – 16 bar The conical body with funn shaped lower body allows maximum air volume and prevents accumulation of deposits at the bottom. Lightweight design. 8.7kgs in weight. Corrosion resistant constru 		
MAIN OPTIONS	 Ball valve isolating. Isolating gate valve with bevel gearbox. Optional test point. Reinforced nylon construction. Non-slam options. Odour control units. SS body material option. 	 Isolating gate valve with be gearbox. Low pressure options. Non-slam. Chambered option. Odour control units. Flanged or BSP inlet 20/80 NP16 		
SIZE	DN50, 80	DN50		
MAX WORKING PRESSURE	16 Bar. (1.6 mpa)	16 Bar. (1.6 mpa)		
TEMPERATURE RANGE	-10°C max. 60°C	-10°C max. 60°C (temporarily up to 90°C)		
BODY MATERIAL	Reinforced Nylon	Reinforced Nylon		
APPLICABLE STANDARDS		EN1092-2 (ISO 7005-2)		

PRODUCT PICTURE



6

IR 6

- el-
- iction.
- evel



FLOOD GUARD

SELF-OPERATING FLOOD GUARD FOR AIR VALVES

For external use with potable water and neutral liquids (sewage).

- Full flow intake and discharge • of air
- Prevents contamination during flooding
- Self-operating float no • auxiliary power required •
- Mountable on various types of valves
- Easily installable on existing products
- Few parts and easy handling • • Effective emergency measure
- for failing manholes •
- Zero sealing pressure new seal concept; closes drip-tight immediately
- All parts made of composite . materials and
- Lightweight 3 kg total weight ٠ •
- Minimum maintenance

2" - 4"

16 Bar. (1.6 mpa)

-10°C max. 60°C (temporarily up to 90°C)

Stainless Steel



ODOUR CONTROL FILTER ASSEMBLY

The Odour Control Filter Assembly unit is ready for use and can be installed on AVK combination air valves for wastewater, series 701/70, 75, 78, 95, 79. The unit absorbs the noxious odours emitted from a wastewater system, which are an unpleasant nuisance in the residential environment. The unit is portable and the spent activated carbon is easily disposable. No heavy equipment is needed and installation is simple and fast.

- The Odour Control Filter Assembly is shipped fully assembled and ready to be attached to the AVK wastewater air valve Series 701/70, 75, 78, 95, 79.
- The Odour Control Filter Assembly can only be connected to air valves having an (Male Threaded) Quick Coupler in their discharge outlet. If this not the case, please call a AVK representative to obtain the correct parts.
- The installation of the Odour Control Filter Assembly with the connected wastewater air valve will require a minimum width of 1.5M in the manhole. The height of the unit will depend on the location of the Odour Control Filter Assembly.
- Optional Installations the Odour Control Filter Assembly can be installed either on a Concrete Support Block or in a hanging position by attaching a hook to the manhole construction and connecting the Odour Control Filter Assembly to it by using the two lifting rings found on the assembly cover.

For full details please visit the AVK website.





FILTER MODEL	1214	1620	1630
Maximal Flow Capacity	350 m³h	713 m ³ h	1000 m³h
Inlet	2"	2"	2"
Dimensions (hxd)	440X365 mm	590X455 mm	890X455 mm
Gross Weight	14 Kg.	27 Kg.	45 Kg.
Est. Carbon Weight	7 Kg.	18 Kg.	31 Kg.
Est. Carbon by Volume	12.5 Litre	32.5 Litre	50 Litre
Air Valve Model	701/70, 75, 95	701/78	701/78

ADDITIONAL AIR VALVES



VB-060 Vacuum Breaker DN200, 250, 300 350, 400, 500, 600 0.2 - 25 bar (3 - 360 psi) Option: Air Valve can be added to vacuum breaker valve



D-26 Combination Air Valve 2" / 50mm - 6"/200mm -Threaded / Flanged 0.1 - 16 bar (0.145-250 psi) 0.1 - 25 bar (0.145-360 psi) 3" only



D-060 NS

Combination Air Valve for High Flow Systems -Non Slam DN25-50 - Threaded DN50-250 - Flanged D-060 NS 0.2 - 16 bar (3-250 psi) D-060-C NS 0.2 - 16 bar (3-250 psi) D-062 NS 0.2 - 25 bar (3-360 psi) D-065 NS 0.2 - 40 bar (3-580 psi)

AIR RELEASE FLOW CHARTS -WATER VALVES

701/10 & 701/13



AUTOMATIC AIR RELEASE FLOW RATE

701/30





AIR & VACUUM FLOW RATE



701/40











AUTOMATIC AIR RELEASE FLOW RATE



AIR RELEASE FLOW CHARTS -WATER VALVES

701/43



AIR AND VACUUM FLOW RATE



AUTOMATIC AIR RELEASE FLOW RATE



701/50



AIR & VACUUM FLOW RATE



D-650 / D-055-C AUTOMATIC AIR RELEASE FLOW RATE



AIR & VACUUM FLOW RATE



701/60



AIR & VACUUM FLOW RATE



AIR & VACUUM FLOW RATE



AIR & VACUUM FLOW RATE



D-000 / D-000-C AUTOMATIC AIR RELEASE FLOW RATE



AIR RELEASE FLOW CHARTS -WASTE WATER VALVES

701/70



AIR & VACUUM FLOW RATE



AUTOMATIC AIR RELEASE FLOW RATE



701/73



AUTOMATIC AIR RELEASE FLOW RATE



701/75



AIR & VACUUM FLOW RATE



AUTOMATIC AIR RELEASE FLOW RATE



AIR RELEASE FLOW CHARTS -WASTE WATER VALVES

701/78





AUTOMATIC AIR RELEASE FLOW RATE



701/95



AIR & VACUUM FLOW RATE



AUTOMATIC AIR RELEASE FLOW RATE



701/96



AIR & VACUUM FLOW RATE



AUTOMATIC AIR RELEASE FLOW RATE



ASSOCIATED PRODUCTS







BS EN 1074-182 BS 5163-182 SERIES 21/35 AVK Resilient Seat Gate Valve DN80-200 PN10/16 upto DN150 PN16 only on DN200 Ductile Iron BS EN 1074-182

BS 5163-1&2

SERIES 37/51 AVK Metal Seat Gate Valve with ISO Flange DN50-300 PN10/16 Ductile Iron EN 1092 (ISO 7005-2)







SERIES 36/89 AVK PE Tailed Resilient Seat Gate Valve DN80-400 PN16 Ductile Iron BS EN 1074-182 BS 5163-182

SERIES 21/50 AVK Resilient Seat Gate Valve DN50-400 PN10/16 Ductile Iron BS EN 1074-1&2 BS 5163-1&2

SERIES 331/70-001 Flanged Ball Valve DN15-20 PN16 Stainless Steel EN1092 (ISO 7005-2)







SERIES 859 AVK Rate of Flow Control Valve DN50-300 PN10/16 Ductile Iron EN 1092 (ISO 7005-2)

SERIES 32/49 NEW

Valve DN80-300

PN16

Ductile Iron

BS 5163-1&2

SERIES 21/78

DN50-400

Ductile Iron

PN10/16

AVK Resilient Seat Gate

Valve with ISO Flange

EN 1092 (ISO 7005-2)

BS EN 1074-1&2

AVK Long Spigot End Gate



AVK Valve Installation Tracker is the Asset Management System from AVK utilising a purpose built, user friendly

mobile app & web portal.

The system is designed to give full traceability of your assets containing unique data on each installed valve. This combined with a unique GPS pin location and a picture of each installation ensures that you have a complete, accurate and auditable records of every valve you installed with the system. Furthermore, all the data recorded can be exported into standard data formats for integration into existing mapping systems.

The web portal gives users full access to the data recorded by the mobile

application, including GPS location, photograph and valve installation details,

allowing the user 'at a glance' full and accurate records. This also allows full

FULL TRACEABILITY IN A FEW SIMPLE STEPS...

The QR code is generated when the valve successfully passes all the relevant test procedures. It assigns a unique serial number for the product which is linked to the full material and test records. When installed the data record becomes complete from raw material to accurate position and application.







SCAN The Qr Code







PICTURE



auditing of installed works.

THE PORTAL

For more information please contact AVK valve installation tracker help avithelp@avkuk.co.uk



AIR VALVES - A.R.I CAD ANALYSIS

The following pages give guidance to the operational requirements of air valves and allows the user to select, size and locate the most efficient air valve design for the application.

1. Functions you wish to be achieved by the air valves in this project:

- Fill rate analysis: Discharging air when the system is under pressure and when filling the line (minimum requirement – always included).
- Burst analysis: Air intake into the system for vacuum protection at full diameter pipe bursts, when water drains in full diameter free flow (unrealistic - not recommended). Uses the Hazen Williams Equation to determine required air intake capacity, equal to full diameter free water flow at possible full diameter, unrestricted (above ground) pipe burst.
- Drainage analysis: Air intake into the system for vacuum protection at pipe drainage through drain valves of known size.
- d. Virtual drainage analysis: Air intake into the system for vacuum protection at partial pipe breaks, up to a defined size (diameter). (The diameters of partial breaks represented by virtual drain valves is defined by percentage of the pipe's diameter).
- e. Water column separation: Air intake into the system during water column separation (at sudden pump trips, sudden isolating valve closure etc.).

Function (a) is assumed to always be required and its analysis is always activated by ARIavCAD. A number of functions are most likely to be desired in a single project.

2. Longitudinal pipe profile tables in excel or line profile drawings in AutoCAD always required.

3. In AutoCAD profiles, the line representing the pipeline must be a continuous Polyline for the full pipeline section to be analysed. The Polyline should be drawn in the direction of flow (first the pump or reservoir, etc., then the following segments of the pipeline, in order, from upstream to down-stream), but if not, this should be made known before analysis is run. Flow can be from left to right, or from right to left, but, direction must be indicated. If not indicated, we assume flow from left to right. Distance and elevation values must appear in the bottom and side of the profile plot (numbers, not just lines).

4. Excel pipeline profiles must include a distance column (accumulated distance or sectional distance – for location) and an Elevation column. A Station ID column is needed for identifying the different stations along the pipeline, but if this item is not included in the submitted data, a local station ID can be created.

5. Fluid type must be stated to allow correct air valve type (Water – clear liquid, or Wastewater – liquid with suspended particles and/or aggressive elements)

6. Initial working pressure or head at the pipe segment's first station/beginning (a must). If there are pressure increases or reductions along the line (not including frictional head losses), booster pumps and pressure release valves, for



7. Initial flowrate (a must). If there are flowrate increases or reductions along the pipeline, connections to other supply or distribution lines, for instance, they should be included.

8. Pipe size for every section of the line (a must).

9. Pipe material for every section of the line (a must). For a more exact analysis, the Hazen-Williams coefficient and the Celerity (pressure wave velocity), of each pipe section, could be included.

10. Filling velocity (not a must for multi-purpose analyses, is a must for fill rate analysis only).

11. Maximum air valve spacing. It is usually recommended to limit air valve spacing to no more than 500-750mtrs. For larger diameter pipes, DN250 and higher, it is recommended to limit spacing to less than that.

12. Manifold size preference (if preference for fewer air valves in a single location/installation (manifold), please advise.

13. Air valve material preference (epoxy coated cast or ductile iron, re-inforced epoxy coated steel, reinforced nylon, stainless steel)



QUESTIONNAIRE TO BE SUBMITTED WITH ANALYSIS REQUEST - PAGE 1

*In what form is the pipe profile submitted

Excel table spreadsheet **AutoCAD** Polyline profile drawing

*Liquid type

Clear water Wastewater (solids or aggressive elements)

Pipe filling velocity (including units, default 1.5 ft/s)

Preferred maximum spacing between air valves (including units, default 500 m.)

Preferred air valve body material (default stainless steel for wastewater)

Should manifolds (multiple air valve in a single installation) be avoided if possible? Yes

No

<u>Pipeline section data</u> (section staring point must be described – pump station, reservoir, elevated reservoir, middle of the pipeline, etc')

Section: If there are no changes in pipe material, pipe diameter, and/or flowrate, and there are no booster pumps along the line, the whole project is one pipe section. Different sections are determined by pipe characteristics, flow changes and pressure enhancement. Most pipelines analyzed consist of only one section.

From station	To station	Pipe diameter (including units) *	Pipe materail *	Flow rate (including units) *	Pressure or head at the beginning of the section (including units) *	Pressure wave velocity (celerity) (not a must)	Hazen Williams coefficient not a must)

For AutoCAD profiles (Profile plots must include elevations on the x-axis and distance on the y-axis)

The line representing the pipeline must be a continuous (all line sections connected) polyline.

*Flow direction

Left to right (default) Right to left

*Line drawing direction

Left to right (default) Right to left

QUESTIONNAIRE TO BE SUBMITTED WITH ANALYSIS REQUEST - PAGE 2

For Excel profile tables (Profile table must include, at least, a distance column and an elevation column)

*Flow direction in the table

From top to bottom (default) _____ From bottom to top _____

Analysis preferences in addition to fill rate analysis (can be more than one)			
Real Drainage analysis	Ye	(drainage valve locations and sizes required) No	
Virtual Drainage analysis (default)	Ye: Virtua (defaul No	and the second s	
Burst analysis (not recommended)	Perce very extr	Yes	
Water column separation (recommer	No nded) No	Yes	
Analysis type to be determined by A	A.R.I. No	Yes	

Comments, special requests, special explanations, etc:

*All items marked with the red star must be entered for us to perform analysis



Graham Charnley Market Sector Manager - Clean Water T:+44 (0) 7778 536288 E:grch@avkuk.co.uk

7

Northampton Office T: +44 (0) 1604 601188 F: +44 (0) 1604 604818 E: customerservice@avkuk.co.uk Invicta Site Solutions: T: +44 (0) 1622 754613 E: sitesolutions@invictavalves.co.uk

Webshop https://shop.avkuk.co.uk/





AVS OCT 2016 Copyright@AVK Group A/S 2016