



**WIDE RANGE OF
PRODUCTS FOR
IRRIGATION**

Expect... **AVR**





BETTER IRRIGATION MANAGEMENT SAVES WATER

Warmer climate and growing population call for efficient exploitation of our land and water resources. Irrigation is the artificial process of applying controlled amounts of water to plants at regular intervals.

It is used to assist in the growing of agricultural crops, maintenance of landscapes, frost protection as well as revegetation of disturbed soils in dry areas – i.e. during periods of inadequate rainfall.

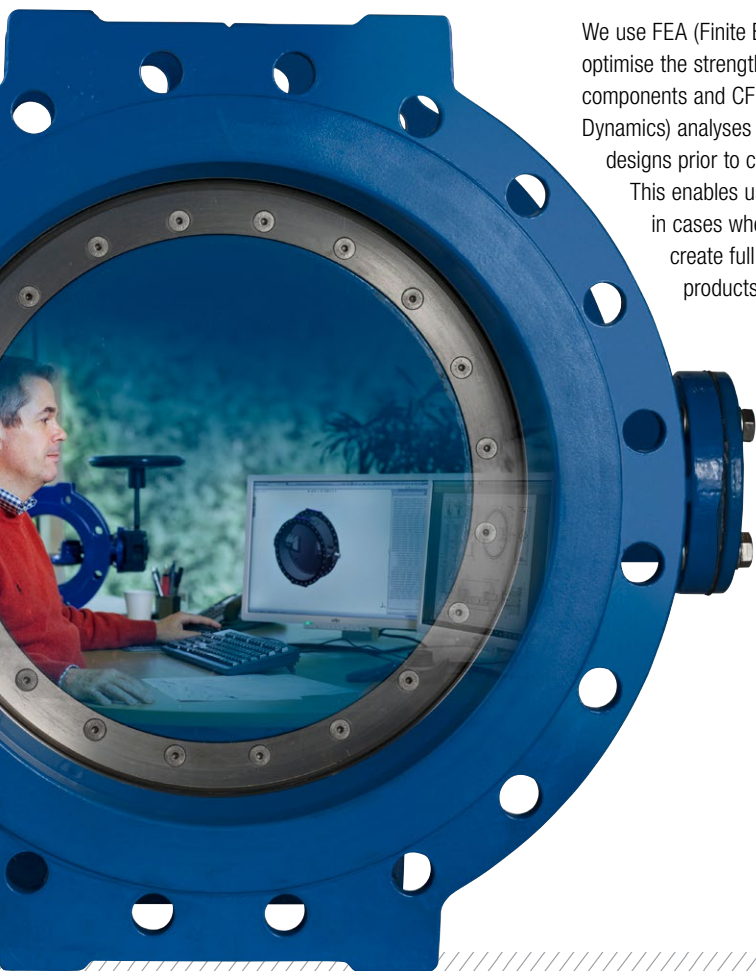
Irrigation systems are also used for cooling livestock and for dust suppression, as well as for drainage.

For solutions to efficient Irrigation, AVK has the experience and know-how as AVK has been in the valve business for more than 50 years. Today, we offer a wide range of products and solutions to fit your irrigation project or initiative.

Our offer within Irrigation comprises products such as gate valves, butterfly valves, check valves, air valves, control valves, flowmeters, level transmitters, monitoring systems, couplings, filters, fittings and repair clamps – all according to the local standards including the main standards of DIN, BS, AWWA, AS and JIS.

More than 4500 people in the AVK Group are doing their utmost to ensure that AVK remains one of the world's leading valve manufacturers for water, wastewater, fire protection, gas and irrigation applications

EXPECT LASTING INNOVATIONS



Inhouse R&D

In our Development Department in Denmark, ideas and suggestions for new products are gathered, and existing products are updated continuously.

We use FEA (Finite Element Analysis) to optimise the strength and geometry of our components and CFD (Computational Fluid Dynamics) analyses to validate different product designs prior to creating physical prototypes.

This enables us to predict consequences in cases where it is impossible to create full scale tests on physical products.

We make our own test and production equipment, and in our flow lab, we conduct thorough prototype and life cycle tests prior to release for production. New product types are typically field tested in co-operation with end users before final launch.

Quality certifications

AVK's quality management system is certified according to ISO 9001. Moreover, we are certified to ISO 14001, the international standard for environmental management, and ISO 45001, the international occupational health and safety standard.



EXPECT US TO EXCEED MARKET STANDARDS

Third party certification

Authorities such as DVGW (Germany), KIWA (Netherlands) and UL & FM (the US) offer certification of finished valves, and these are also recognised and accepted by other countries that do not have their own certification schemes.

By obtaining and maintaining the most widely accepted certification, we show our customers that AVK valves always meet the highest quality and safety standards.



Expect... AVK

In our business there are five cornerstones that must be in place in order to meet customer expectations: Quality, reliability, innovation, sustainability and customer service.

But we need to go further than that. We go further to exceed our customers' needs and expectations.

"Expect... AVK" means that our customers should rightfully expect us to exceed market standards. "Expect... AVK" means that we relentlessly strive for increased customer benefits!

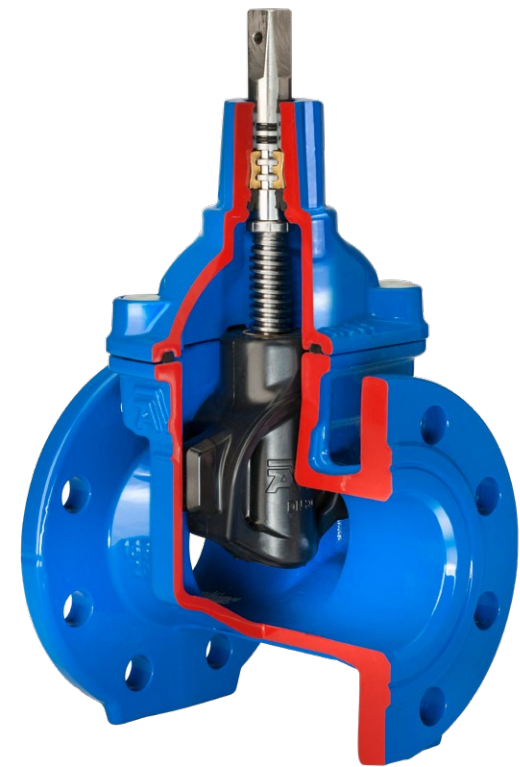
To ensure that we keep pushing the boundaries of what the market can expect, we have formulated promises that we will strive to deliver in all our markets:

- EXPECT** A LONG-TERM PARTNERSHIP
- EXPECT** QUALITY IN EVERY STEP
- EXPECT** LASTING INNOVATIONS
- EXPECT** TOTAL SAVINGS
- EXPECT** SOLUTIONS, NOT JUST PRODUCTS
- EXPECT** GLOBAL LEADERSHIP AND LOCAL COMMITMENT
- EXPECT** PROMPT RESPONSE
- EXPECT** IT TO BE EFFECTIVE AND EASY

See more on www.avkvalves.eu



AVK GATE VALVES RENOWNED FOR SUPERIOR QUALITY



The wedge is the heart of a gate valve and the quality of the wedge rubber is crucial for the valve function and durability. AVK wedges are fully vulcanised with AVK's rubber compound offering outstanding characteristics.

The double bonding vulcanisation process ensures maximum adhesion of the rubber and prevents creeping corrosion.

Fixed wedge nut prevents corrosion

AVK's wedge nut design with a fixed, integral wedge nut outperforms the traditional loose wedge nut design as it prevents vibration and thus also corrosion and malfunction. It is made of dezincification resistant brass certified for use in contact with drinking water according to the stringent EU standards.

Wedge shoes for smooth operation

The fixed wedge nut and the vulcanised wedge shoes secure a smooth operation of the valve and low operating torques. The wedge shoes protect the rubber against wear which otherwise would arise from friction during operation.



Safe operation

The large stem hole prevents stagnant water and accumulation of impurities. The large rubber volume in the sealing area combined with the excellent compression set provide optimum sealing.

State-of-the-art rubber technology

AVK GUMMI A/S develops and manufactures the rubber compound for wedges and gaskets using highly advanced technologies.

Data is collected throughout the entire manufacturing process which secures traceability of every single ingredient, compound and final component. AVK performs a number of tests to ensure that the compression set values, the adhesion and the tensile strength of the rubber meet the predefined requirements.



Efficient bonding is the key to durability

The wedge core is immersed in two different baths to provide ultimate bonding between core and rubber. Even if a sharp object penetrates the rubber during closing of the valve, the bonding is so strong that there is no risk of creeping corrosion. As a result, we offer the best possible corrosion protection of the wedge.

No contamination of drinking water

The EPDM rubber recipes are composed with focus on minimising the formation of biofilm. The rubber will therefore not provide breeding ground for bacteria.

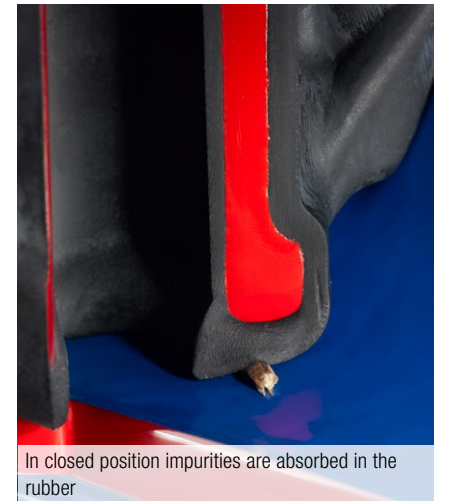
High resistance

The drinking water approved EPDM compounds are resistant to ozone and water treatment chemicals, and are of course taste, smell and colour neutral.

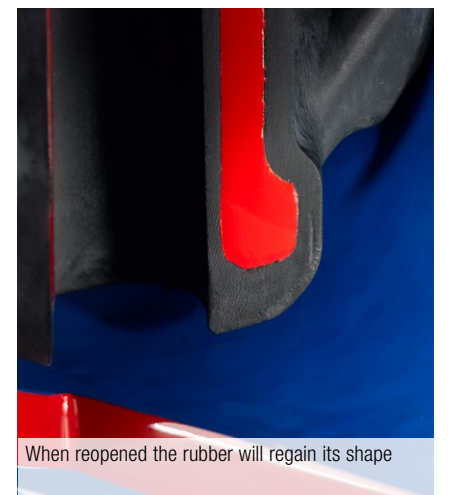
Excellent ability to regain original shape

AVK GUMMI A/S has a profound knowledge of a rubber's compression set, meaning its ability to regain original shape.

Even after many years of service where the wedge rubber has been compressed numerous times, the rubber will regain its original shape and ensure a tight sealing. Impurities will not affect the tightness of the valve, as the impurities will be absorbed in the rubber when the valve is in closed position and will be flushed away when the valve is reopened.

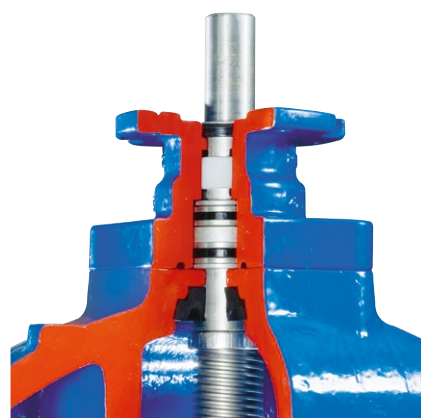


In closed position impurities are absorbed in the rubber

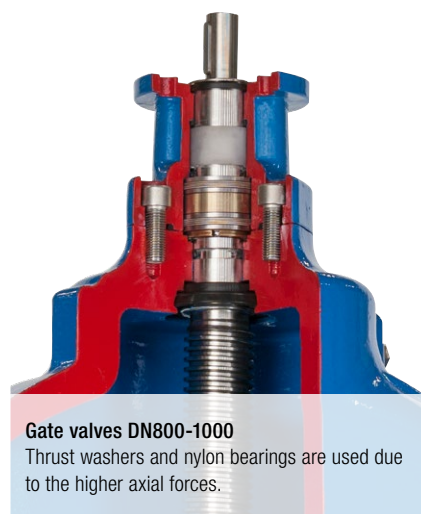


When reopened the rubber will regain its shape

AVK GATE VALVES OFFER UNIQUE FEATURES



Gate valves DN450-600
In DN450-600 the valves are designed with two roller bearings and a thrust collar of stainless steel to ensure low operating torques.



Gate valves DN800-1000
Thrust washers and nylon bearings are used due to the higher axial forces.

Wedge stop and rolled threads

The wedge stop provides a firm stop against the wedge nut when opening the valve. This prevents the wedge from compressing the stem seals and from damaging the coating inside the bonnet. Therefore, the wedge stop gives prolonged durability of the valve.

The stem threads are rolled in a cold pressing process which maintains the steel structure and therefore increases the strength of the stem. This method also ensures a smooth thread surface that gives low operating torques.

Triple safety stem sealing

An NBR wiper ring protects against impurities from the outside. Tightness and low friction are provided by four NBR O-rings in a polyamide bearing, or optionally a replaceable brass stem nut, preventing galvanic corrosion. An EPDM manchette is the main seal to the flow.

The full circle thrust collar of high strength dezincification resistant brass provides fixation of the stem and low free running torques.

The stem is mounted from below, and the thrust collar expands inside the bonnet and fixes the stem, preventing it from being blown out.

Three strong coatings

The standard corrosion protection is an internal and external fusion bonded epoxy coating in compliance with DIN 3476 part 1 and EN 14901, GSK approved. We control each batch of epoxy coated components to ensure a layer thickness of minimum 250µ, a pore-free surface, high impact resistance and adequate curing. In addition to our own tests, the independent GSK authorities control the adhesion and cathodic disbonding of the epoxy coating according to their guidelines.

Furthermore, we offer gate valves with a highly wear-resistant internal enamel lining offering excellent protection against creeping corrosion.

We also offer an external polyurethane (PUR) coating which gives outstanding protection of the valve against galvanic corrosion, shielding the valve completely from its surroundings. In addition, it eliminates any risk that electrical currents will penetrate the valve and gives additional protection when installed in aggressive soils. The polyurethane coating is quality tested according to EN10290 type 2, class B.



Tight assembly of valve body and bonnet

An EPDM bonnet gasket is fixed in a recess in the bonnet to prevent blow-out. The stainless steel bonnet bolts are encircled by the bonnet gasket, embedded in the casting to ensure that no threads are exposed to the surroundings, and finally sealed with hot melt to prevent corrosion.

Strong PE end connection

A fully welded PE pipe system offers a lot of benefits such as reduced risk of leakage, ease of installation and a high durability. With AVK's comprehensive range of gate valves with PE pipe ends you can design a fully welded PE pipe system up to 630 mm.

A piece of standard PE pipe is pressed directly onto the grooved valve end. The grooves combined with a sleeve around the valve/pipe connection ensure that the PE pipe material is firmly secured and that the connection remains tight and tensile during the entire service life of the pipeline. The connection is sealed with a shrink hose to provide corrosion protection.

Pressure test

Every single valve is pressure tested according to EN 1074-1 and 2 /EN 12266 before leaving the factory.



Feature summary

- Fixed, integral wedge nut prevents corrosion caused by vibration
- Wedge and body guide rails ensure stable operation
- AVK's wedge rubber has an excellent ability to regain its shape
- AVK's wedge rubber features an excellent bonding, minimum formation of biofilm and a high resistance to water treatment chemicals
- Wedge shoes protect the rubber against wear
- Large stem hole in the wedge prevents stagnant water
- Rolled threads increase the stem's strength
- Anti-blowout stem design
- Wedge stop protects seals and coating
- Triple safety stem sealing
- Thrust collar provides fixation of the stem and low free running torques
- Bonnet gasket is fixed in recess and encircles bonnet bolts to prevent blow-out
- Countersunk bonnet bolts sealed with hot melt to protect against corrosion
- Full bore ensures low head loss and enables use of pipe cleaning devices
- Low operating torques ensure easy operation
- Fusion bonded epoxy coating in compliance with DIN 3476 part 1 and EN 14901, GSK approved, optionally internal enamel and external PUR coating

AVK DOUBLE ECCENTRIC BUTTERFLY VALVES THE SAFE CHOICE



AVK offers double eccentric butterfly valves in DN150-3200 designed with durability in focus. The tilted and firmly secured disc, the optimised seal design and the corrosion protected shaft end zones are features that exceed the market standards.

Longer service life due to tilted disc

The tension on the disc is released after a few degrees of opening which minimises wear of the disc seal. Furthermore, the design minimises the compression of the sealing which ensures low operating torques.

Safe disc and shaft connection

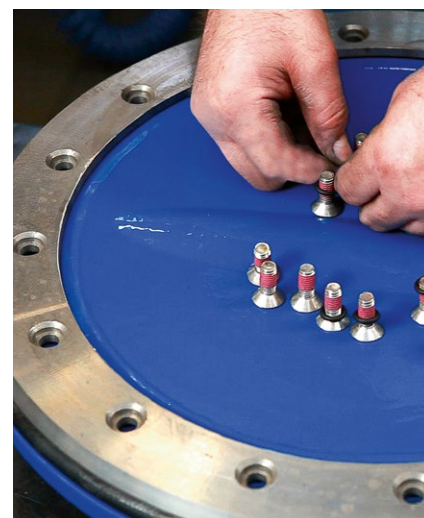
The disc and shaft are connected by means of a key and a keyway. The key is secured with two set screws to prevent fluttering caused by flow velocity and necessary play in the key and keyway connection. In the large dimensions the disc is secured with two stainless steel drive dowels, with key and keyway as back-up.

Two seat designs

The integral seat design has a machined and epoxy coated ductile iron seat integrated in the body. The stainless steel seat design has a replaceable seat ring of stainless steel sealed with an O-ring to avoid leakages under the seat ring.

Disc seal optimised for high performance

The disc seal is shaped to secure fixation in correct position providing a very reliable function. The excellent rubber quality makes it possible to reduce the amount of rubber which ensures low closing torques. The EPDM sealing is approved by DVGW, KIWA and WRAS.



The stainless steel retainer ring keeps the disc seal in place. It is fixed with stainless steel bolts coated with precoat 80 to prevent loosening. The threaded bolt holes in the disc are corrosion protected with O-rings around the bolt heads.



Shaft design features

The shaft sealing is replaceable under pressure to enable easy maintenance. Sealings of EPDM secure tightness from inside and out, and NBR sealings protect against impurities and fluids from outside.

The butterfly valves are prepared for a locking device which makes it possible to lock the disc in open/closed position if gearbox replacement becomes necessary.

The low friction PTFE bearings ensure low operating torques and the protected shaft ends secure durability since there are no uncoated ductile iron surfaces exposed to the media.

Bi-directional and slim

The valves are bi-directional even though valves from DN700 and up are marked with an arrow indicating the preferred flow direction. The weight is minimised to make handling easier, and to put less strain on the environment.

Product approvals

The butterfly valves are approved by:

- DVGW up to DN1200
- KIWA up to DN600
- WRAS in DN700-1200

For larger dimensions all components are approved.

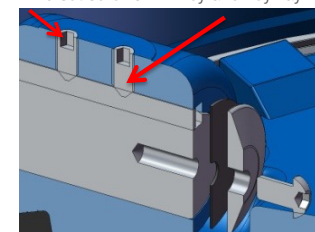
Actuation of your choice

AVK can offer any type of actuation. Our standard options are IP67 gearboxes with handwheel for above ground installation, IP68 gearboxes for buried service, and ISO-input gearboxes for mounting of electrical actuators. Furthermore, we offer extension stems, adaptors and handwheels.

Stainless steel plates with gaskets

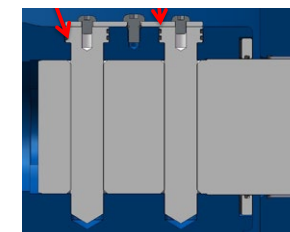


Two set screws

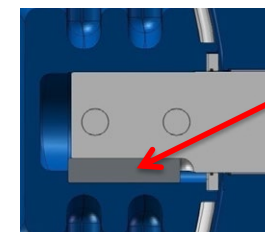


Key and keyway

Two O-rings on each dowel, protected with stainless steel plate fixed with bolts



Key and keyway as back-up



The above illustrations shown are for sizes DN200-600

The above illustrations shown are for sizes DN700-2800

AVK CENTRIC BUTTERFLY VALVES FIXED OR LOOSE LINER



AVK offers the widest range of butterfly valves at the market. The fixed liner butterfly valves from AVK are among the very few of its kind and offer outstanding advantages. Furthermore, we offer a wide range of loose liner butterfly valves.

Unique fixed liner design

An outstanding seating concept is the heart of the valve. The rubber is injection moulded directly on the valve body forming a permanent bond with an optimal rubber shore hardness. Consequently, there is no risk of deformation or dislocation of the liner and the valves are therefore suitable even under vacuum conditions.

The disc has a profiled sealing edge which requires minimal deformation of the liner to achieve a tight sealing. This gives less wear of the liner and low operating torques.

Feature summary

- Fixed liner with no risk of deformation or dislocation, thus suitable under vacuum conditions
- AVK rubber liner with excellent ability to regain shape after compression
- Disc with profiled sealing edge gives less wear of liner
- Low operating torques due to fixed liner, profiled disc and shaft bearings
- Streamlined disc prevents turbulence, pressure drops and valve vibration
- Available as wafer, semilug, full lug, double flanged short and double flanged long in DN40-2000 with any type of actuation

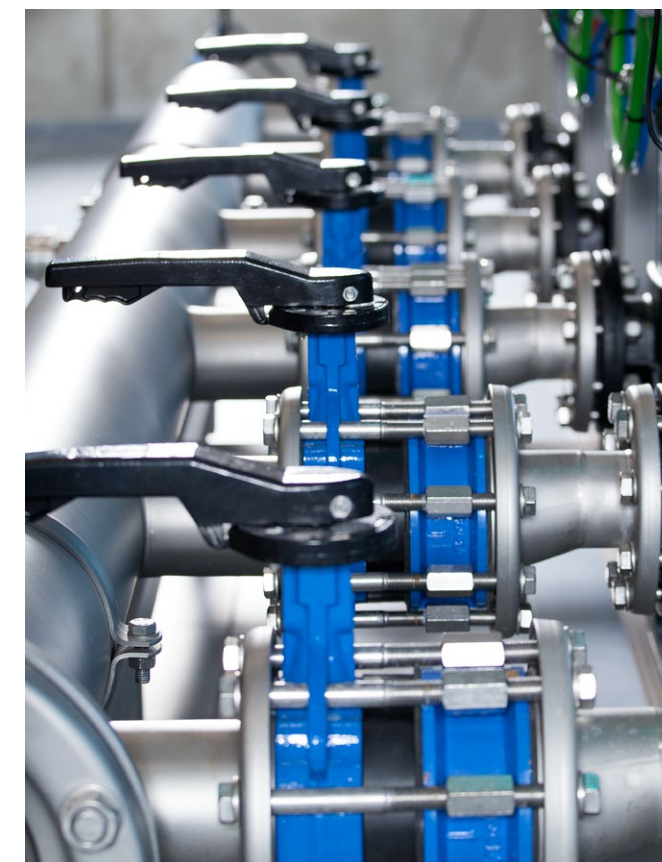
No turbulence or pressure drops

The streamlined disc gives low flow resistance when the valve is open. Therefore, the valves will not cause any turbulence, pressure drops or valve vibration, and will reduce energy costs for the user.



Profiled disc and unique AVK rubber ensure exceptional durability

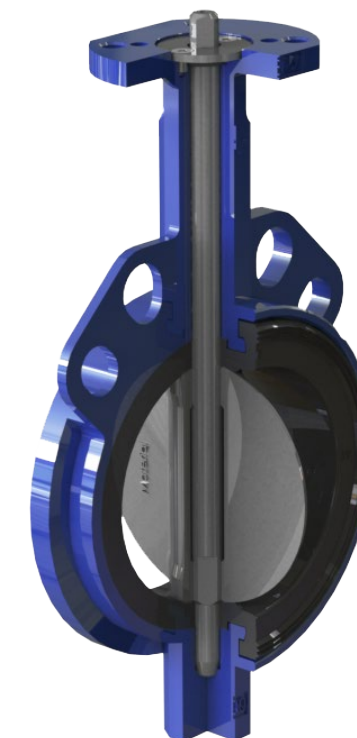
The unique AVK rubber compound has an excellent ability to regain shape after compression, and this ability combined with the profiled disc secure tightness even after thousands of operation cycles.



Wide range with loose liner

AVK's range of loose liner butterfly valves comprises wafer, lug and U-section butterfly valves in DN25-1600 with any type of actuation and with a wide selection of disc and liner materials.

The replaceable liner of drinking water approved EPDM has a very robust construction. Its convex form and integrated lip sealings in the shaft passage ensure a tight connection with the shaft. Moreover, the special shape ensures a unique grip to the body, preventing any relative liner displacement during operation. The integrated gasket faces enable easy installation between flanges.



Feature summary

- Stainless steel shaft with anti-blowout design and position indication
- Square driven disc mechanism with effective power transmission
- Disc of acid-resistant stainless steel with streamlined shape for optimum flow characteristics and polished edges for minimum wear of the liner
- Replaceable EPDM liner with a unique design
- Ductile iron body with extended neck for insulation and 200my fusion bonded epoxy coating

AVK SWING CHECK VALVES ENSURE OPTIMUM PUMP PERFORMANCE



Unique design

By unscrewing a few bolts the bonnet assembly including hinge and disc can be removed from the body. The hinge is tightened around the shaft with bolts to eliminate play and thus ensure durability.



AVK offers a wide range of swing check valves featuring full bore and low head loss resulting in maximum utilisation of the pump capacity. The swing check valves can be installed in both horizontal and vertical positions and are easy to maintain.

AVK swing check valves are available in DN50-600 and feature full bore and low head loss as well as easy access to maintenance and great durability.

Lever and weight

Swing check valves with lever and weight are appropriate for installations with an increased risk of water hammer at standard velocities.

The solution enables visual check and valves in small dimensions offer the possibility of priming by moving the lever manually. The weight is adjustable on the lever to achieve a soft closing against the seat as well as an optimum closing speed to prevent water hammer.

A guard covering the lever and weight eliminates the risk of injuries. Optionally with limit switches for remote monitoring.

Swing check valves with lever and external spring are suitable for high pressure, insufficient back pressure and high flow velocities.

Feature summary

- Bonnet/disc design gives easy access to maintenance
- Disc with steel insert is fully vulcanized with EPDM rubber (up to DN300) ensuring optimum sealing ability
- Lip sealing on the disc ensures tightness
- Light-weight disc requires a minimum of force to open and close the valve
- The disc is mounted in a nylon bushing, which allows it to move slightly both horizontally and vertically to close completely tight also in case of minor impurities in the seat
- Hinge tightened around the shaft with bolts to eliminate play and thus ensure durability
- Full bore ensures low head loss
- Ductile iron fusion bonded epoxy coating in compliance with DIN 3476 part 1 and EN 14901
- Available prepared for limit switch



AVK AIR VALVES FOR EFFECTIVE PIPELINE OPERATION



Why use air valves?

Trapped air pockets in the piping system cause many problems:

- Increased corrosion
- Increased energy consumption and operation costs
- Failure or inaccuracies in flow metering
- Pressure loss or even complete flow stop delays in the filling of mains
- Increased risk of water hammer

Sudden movements of air pockets may result in a rapid change in flow velocity, leading to high pressure surges of a destructive nature.

Air and vacuum valves

AVK air and vacuum valves are designed to discharge air during the filling of the system, and to admit air into the system during system drainage. The dynamic design allows for high velocity air discharge while preventing early closure. The special orifice seat design with a combination of bronze and EPDM rubber ensures long-term maintenance-free operation.



AVK-ACMO BEST PARTNER FOR IRRIGATION



Warmer climate and growing population call for efficient exploitation of our land and water resources. ACMO-AVK offers real opportunity to achieve social, economic and environmental sustainability of the irrigation process.

Better irrigation management save water resource

Irrigation is the artificial process of applying controlled amounts of water to plants at regular intervals. It is used to assist in the growing of agricultural crops, maintenance of landscapes, frost protection as well as revegetation of disturbed soils in dry areas – i.e. during periods of inadequate rainfall.

Irrigation systems are also used for cooling livestock and for dust suppression, as well as for drainage.

For solutions to efficient irrigation, ACMO has the experience and know-how. ACMO offers a wide range of products and solutions to fit your irrigation project or initiative.

Our offer within irrigation comprises products such as gate valves, butterfly valves, check valves, air valves, control valves, hydrants, flowmeters, level transmitters, monitoring systems, couplings, filters, fittings and repair clamps – all according to the local standards including the main standards of DIN, BS, AWWA, AS and JIS.

ACMO know-how

ACMO is one of the most important references in Italy for the irrigation valves and equipment for water management. After several years of research, investment and more than 70.000 successful installations in the last 6 years, ACMO developed a specific system to manage e control of irrigation water distribution. An increasing number of water authorities are using our system, achieving brilliant results in terms of water and energy saving.

Visit our website for a detailed product program or find more information about our production.

www.acmosrl.com



Hydropass System

The hydrometer integrates, in a compact solution protected by a stainless steel case, the mechanical components suitable for metering and regulation with the ACMO-AVK innovative electronic components suitable for managing and control the input / output parameters.

HYDROPASS SYSTEM SMART SOLUTION FOR WATER MANAGEMENT

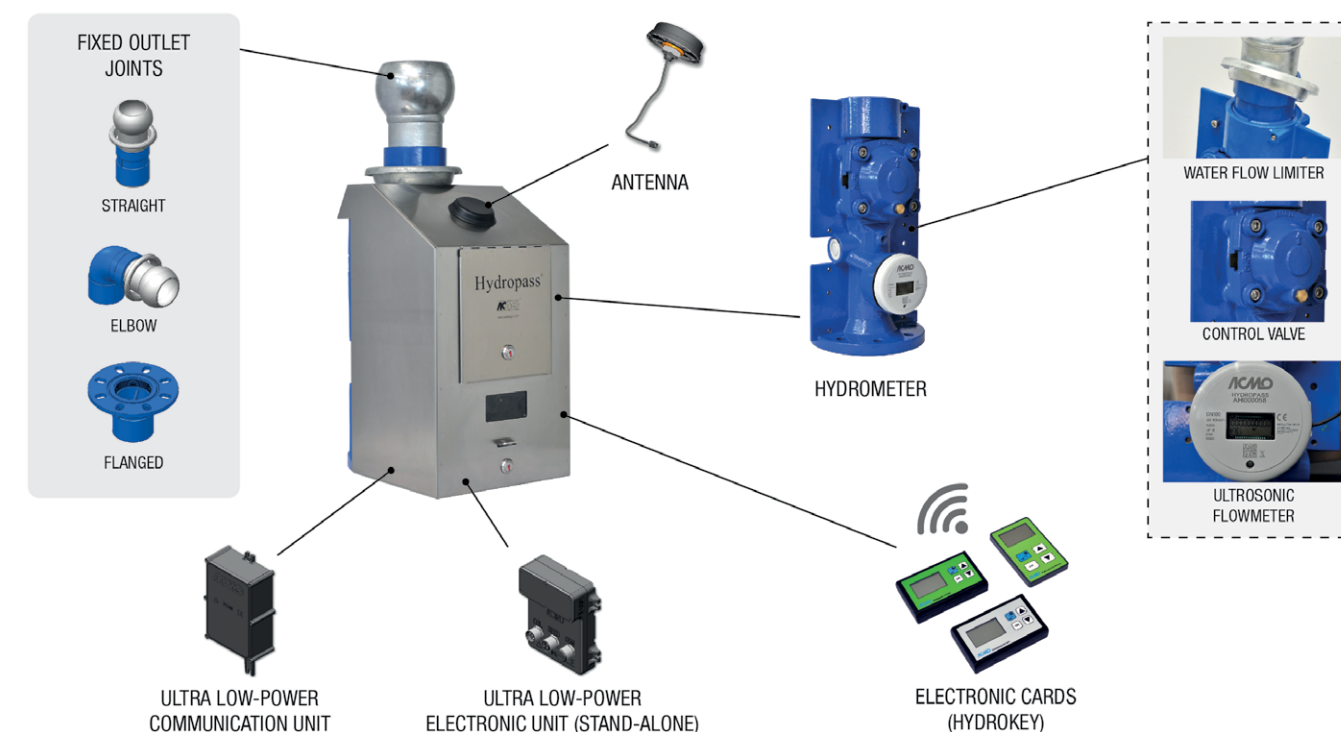


Ultimate monitoring system for the optimization of water resources and the planning of irrigation.

S.I.S. Smart Irrigation System

The system can be coupled with the national databases with weather and soil data to forecast the most sustainable irrigation scheduling. This forecasted scheduling leads to immediate and clear improvement of the irrigation operations with consequent economic, management and environmental benefits.

A distributed communication system has been developed to fulfill the need of updated and instantaneous data from the irrigation system. The communication network allows to have all the information regarding the user outline and his water consumption with the capability to communicate with the hydrometer in emergency or failure situations.



Hydrometer

The Hydropass hydrometer consist in a flanged ductile iron one-piece body with integrated water meter reading (tangential or ultrasonic technology) for irrigation water and a direct action automatic control valve with a SBR diaphragm reinforced with canvas, tested for 5.000 cycles. This product is the perfect synthesis for delivery of water in last generation irrigation plants to single or more farmers.

Main features:

- nominal working pressure is 16 bar (PN16), minimum working pressure is 0,5 bar;
- drilling flanges according to European Standards EN 1092-2 PN16;
- multifunctionality: it can be equipped with all control and regulating hydraulic pilots;
- toughness: being made by one full body with different fixed delivery outlet integrated;
- easy installation and maintenance on the plant;
- low headloss.

The hydrometer is fit for assembling protection devices and tampering system (fixed by lateral supports and magnets) in order to protect hydraulic circuit, water meter and automatic control valve.

The hydrometer it can be equipped with 3 different types of fixed output connections (straight, elbow and flanged) in which can be inserted a

water flow limiter.

Ultra low power electronic unit

The electronic unit, which integrally control the hydrometer and its function, is installed inside the hydrometer shell. It is devoid of any component that can be damaged as display or buttons. It is enclosed in a case with protection IP68, equipped with its own battery. The battery is replaceable and guarantees an autonomy of at least 10 years. The unit can be set to operate in standard, hybrid and contact less version.

Communication unit

The communication unit is fully autonomous, equipped with latest generation of GPRS modem transmission, integrally mounted into the hydrometer. It is equipped with a low visual impact antenna; protected by an IP68 protective case with 10-year life replaceable battery.

Radio antenna

A radio antenna is installed integrally inside the hydrometer carter to allow data transmission by free ISM band

Radio station gateway

The gateway allows to receive the data from the hydrometer and send them directly to the control room and vice versa, thus allowing a bidirectional communication. In this way is possible check the status, alerts or theft in real time. Furthermore, this system allows irrigation reports and statistic studies. Is characterized by a low power consumption (battery life > 10 years),

a better data reception (15 km line-of-sight transmission, thanks to Long Range technology) and no subscription/traffic costs. Each gateway can manage more than 10,000 units in the field.

Hydrokey

Allow the user to get the water and the water authority to carry out the necessary checks and maintenance operations. The cards are equipped with latest generation of display, customized graphic, 4 buttons pad (user friendly), replaceable lithium battery with 5-year life guarantee, protected by an IP67 case.

Features:

- User duties set
- Hydrometer activation
- Automatic billing of prepaid amount according to real water consumption



INTEGRATION WITH MANAGEMENT SOFTWARE



Real data collection in electronic format to develop and study water resource consumption and efficiency strategies.

LoRaWAN™ meter reading

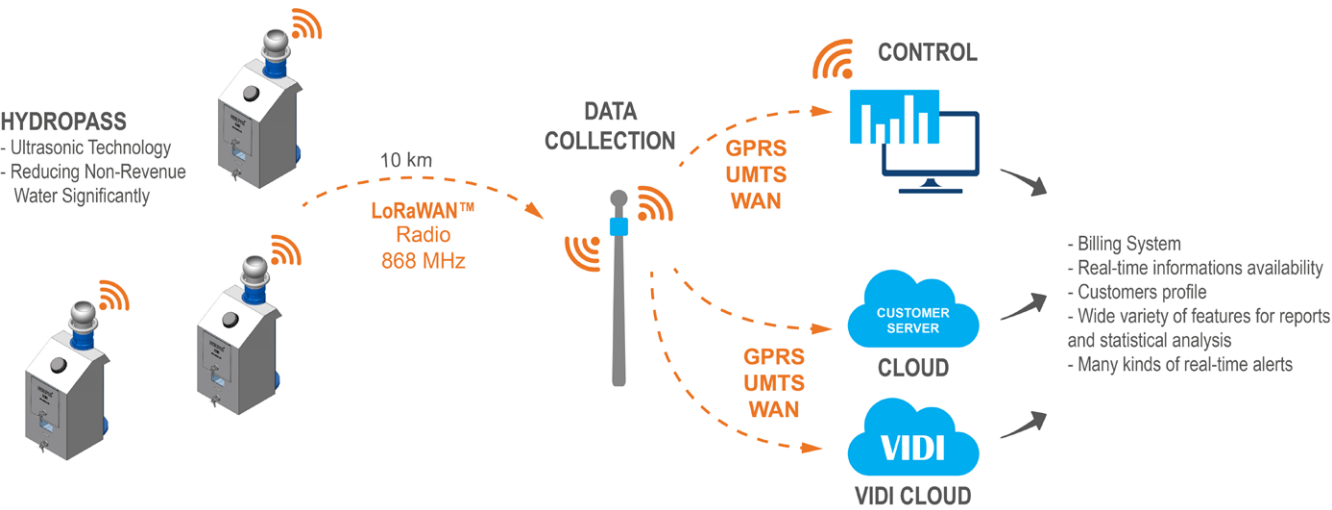
The LoRa Radio module applicable to any Hydropass allows you to take advantage of the LoRaWAN™ functionality for communication with remote hydrants. LoRaWAN™ is a specific “Low Power Area Network (LPWAN)” specifically designed for:

- battery operated devices;
- fixed or mobile devices;
- private, regional, national or global networks.

The LoRaWAN™ network architecture has the following characteristics:

- secure bi-directional communication;
- star-of-star network topology;
- transparent gateway for transmitting messages between end devices and a central network server;
- gateways connected to the server via standard IP connections;
- wireless communication of single-hop devices to one or more gateways.

The acquisition of consumption data takes place automatically through concentrators installed on the territory (large areas with radius > 10 Km) that receive the data and transmit them directly to the management centre. The communication between terminal devices and gateways happens on different frequency channels and with different data rates. Than the data are direct transfer to the management centre and immediate stored.



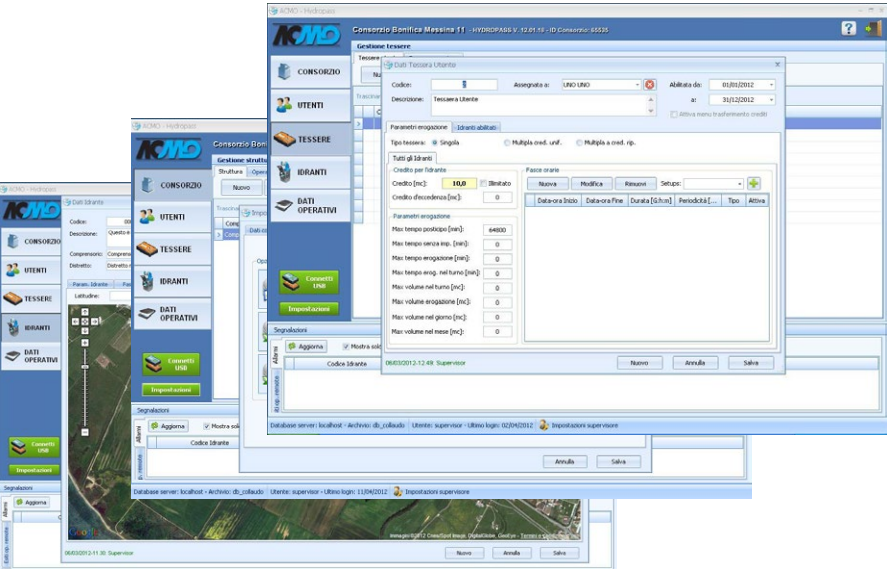
The management software (HYDROSOFT)

It manages the whole system. It is realized through the latest programming environment in Microsoft. Completely compatible with Microsoft operating systems, from Microsoft XP on. The “User Friendly” interface coupled with the latest graphic technology make the software intuitive, easy and enjoyable. The system allows assessing the geographical location of each hydrant and uses Google Maps to show a geo-referenced localization of them.

The software is equipped with an advanced managing system, which provides customized prints and reports. The management software (Hydrosoft) can be coupled with our S.C.A.D.A. and S.I.S. systems. It allows to manage the entire irrigation grid. It is possible to create irrigation sectors, allocate water resource according to user' soil and crop needs, plan and schedule the water resource allocation in the short and long period.

The reference guidelines for the management of completely automated hydrometer systems are changing rapidly. We research constantly new services and features to add to the software in order to fulfill all the different needs of the Water Authorities which use this system.

The software HYDROSOFT allows an integrated management of the hydrants and the water meter equipped with remote reading. The data are acquired directly through LoRaWAN™ Gateway. 100% customizable on the customer needs, it allows the management of the master data, the accounting of the users and the generation of reports



HYDROPASS HK IRRIGATION AUTOMATED SYSTEM

Year: 2012

Location: CARBONIA (CI) -SARDEGNA -ITALY

Consultant: C.B. BASSO SULCIS (CI)

Client: C.B. BASSO SULCIS (CI)

Main crops: grapes, vegetables, alfalfa.

Products: 2420 x Smart Hydropass DN100 with accessories

Description

The project goal is to reduce the Consortium management costs and to achieve the fair distribution of the resource between all the users. Thanks to the good results achieved by a pilot installation of some Smart Hydrometers in the recent past all water delivery and point has been equipped with Smart Hydrometers.



HYDROPASS HK AUTOMATED SYSTEM WITH REMOTE MONITORING

Year: 2014

Location: OZIERI (SS) -SARDEGNA -ITALY

Consultant: C.B. DEL NORD SARDEGNA (SS)

Client: C.B. DEL NORD SARDEGNA (SS)

Main crops: grapes, olives, vegetables, alfalfa, grazing meadows.

Products: 1100 x Smart Hydropass DN80
840 x Smart Hydropass DN100

30 x Smart Hydropass DN150

Description

The project goal is to equip all the water delivery points of the area Anglona: BassaValle del Coghinas Pianadi Perfugas, with a Smart Hydrometers. The Smart Hydrometers are configured for remote monitoring through GPRS communication protocol.



AVK CONTROL VALVES DIAPHRAGM OPERATED



Water is a scarce resource that we need to protect. We need to secure water for the next generations and a growing population. Control valves can help reduce water losses and contribute to efficient water supply management by maintaining a certain pressure, flow or level, regardless of changes in the supply network.

The safe choice with 10-year warranty

AVK diaphragm operated control valves are designed according to EN 1074-5 and to provide network stability, accurate regulation, easy maintenance and long durability.

AVK control valves are available in DN50-600, with reduced and with full bore. Control valves with reduced bore are appropriate for most applications, as the smaller bore often offers more accurate regulation. Control valves with full bore are recommended, if high Kv values are needed, e.g. in front of hydrants.

High quality material

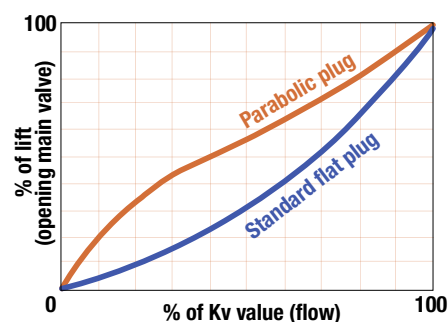
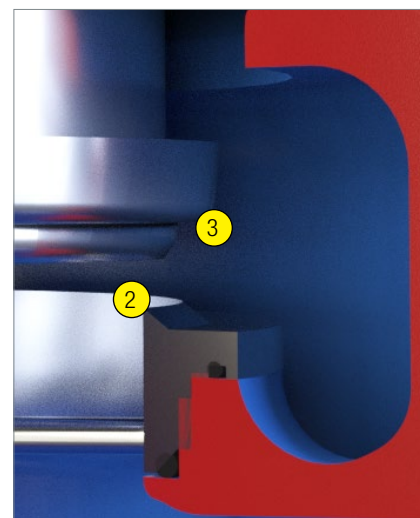
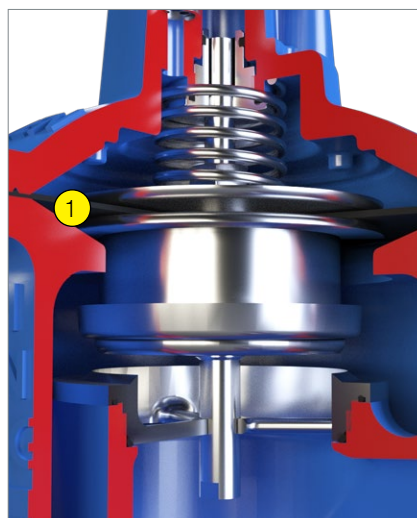
The body and bonnet are made of ductile iron with fusion bonded GSK approved epoxy coating.

The diaphragm is manufactured by AVK GUMMI and made with EPDM rubber with polyamide reinforcement.

All non-coated internals are of stainless steel AISI 316 as standard.

Design features of the valve

- Large diaphragm design (1) secures fast reaction to changes in pressure. Its asymmetric axial position gives less stress near closed position.
- Lifted seat design (2) prevents damage inside the valve body caused by cavitation.
- Parabolic plug design (3) provides precise regulation and stability at low flow. Furthermore, it reduces noise and vibration. See below characteristics, illustrating the performance compared to a standard flat plug



PATENTED PILOT SYSTEM WITH UNIQUE FEATURES



Pressure reducing valve



Pressure sustaining/relief valve

Modular pilot system

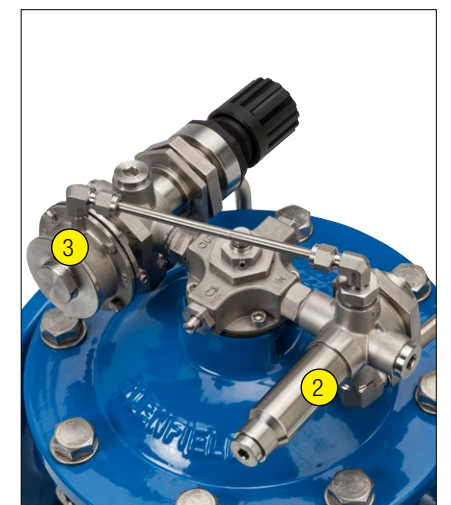
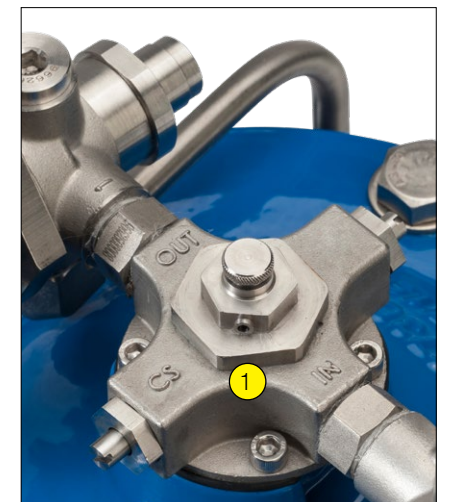
The modular design with interchangeable parts offers great flexibility as the pilot system is easily altered to fit other or multiple applications without replacing the valve. The pilot system consists of three main components:

- The distribution block (1) connects the pilot system to the main valve. As a unique feature, it offers adjustment of regulation speed for full control, easily adjusted using standard tooling, and giving full control e.g. in situations, where water hammer may occur.
- The filter (2) features high capacity and easy maintenance. When using the optional flush valve it also offers easy access to cleaning, while the valve is in operation.
- The hydraulic control block (3) can be set up for different applications. It features easy hand adjustment of the balanced pilot valve which is capable of very precise settings.

Compact design

The external pipework takes up less space and is less vulnerable to damage during installation compared to many other control valves.

It is designed using components with standard threads offering easy sourcing of replacements as well as easy fitting using standard tools. All metal parts are of stainless steel AISI 316 as standard.



CONTROL AND REGULATE WATER FLOW AND PRESSURE

Needle valves, sometimes referred to as plunger valves, are regulating valves and enable engineers to finely control and regulate water flow and pressure.



Precise regulation

The precision of the needle valve is achieved through the fine movement of the shaft, which enables the gearbox to move the piston tube in sliding motion towards opening or closing position, depending on the requirements from the control system.

Needle valves can be used in many different applications with a need for flow or pressure regulation. In water treatment and distribution, dams, reservoirs, power plants and industry needle valves are e.g. used for:

- Flow control
- Pressure regulation
- Pump start
- Turbine by-pass
- Discharge
- Reservoir inlets
- Air regulation

When to use needle valves?

Compared to diaphragm control valves, the needle valves can be used with higher differential pressure, and our needle valve standard range covers a pressure range up to PN40, and on request up to PN100. Our standard size range covers DN80 to DN1600, and on request up to DN2000. Our needle valves are therefore also recommended for regulation in large diameter pipelines and at high pressures.

FEATURES AND BENEFITS

AVK needle valves are straight-way type control valves and are designed with a one-piece body construction and an innovative design for flow optimisation to ensure a reduced pressure loss in open valve position.

State-of-the-art design

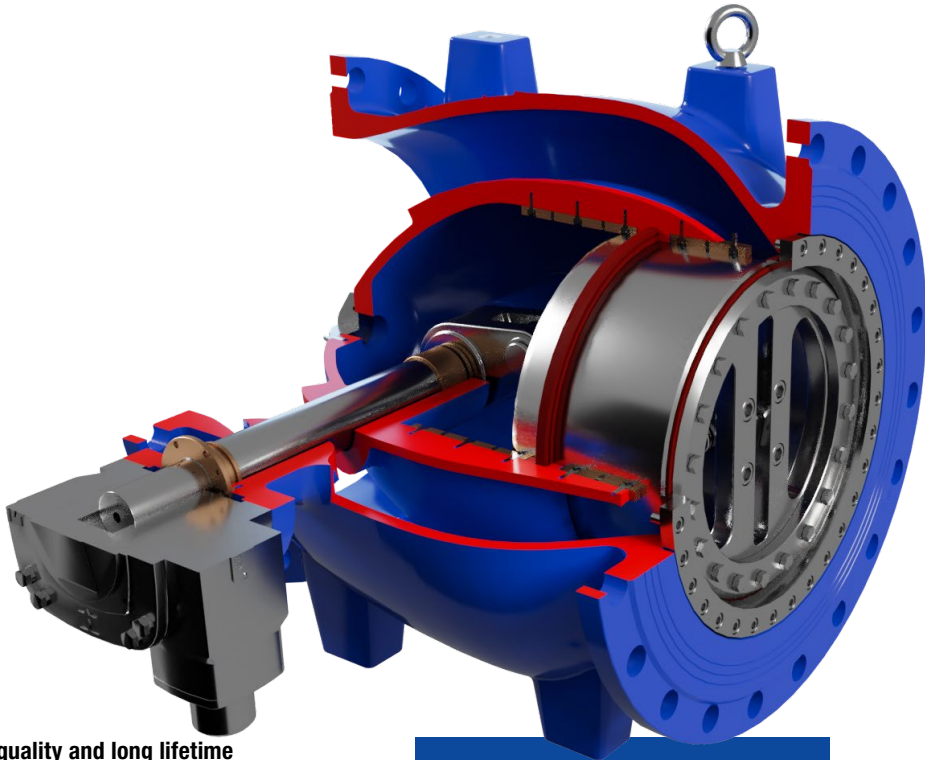
Our needle valves require very low operating torques, as the piston is always in hydraulic balance with equal force on both sides at all valve positions. This feature facilitates the operations of all actuators and significantly reduces actuator and gearbox costs.

High quality and long lifetime

All main internal parts are in stainless steel and the body is completely protected with fusion bonded epoxy coating to ensure long life. The high performance seal is easily replaceable and is located on the piston as opposed to on the seat preventing abrasion when fitted with anti-cavitation trim. In addition, the compact piston has 4-6 guides to ensure very low vibration.

Main features and benefits

- One-piece body construction
- Stainless steel internal parts and fasteners for a long life of the valve
- All ductile iron parts coated with min. 250 µm fusion bonded epoxy
- Shaft sealing with double O-rings
- Main seal in the no-flow zone at the valve outlet
- 4-6 guide rails ensure very low vibration
- Gaskets in thermoplastic PUR for high resistance to abrasion
- Pressure balance in chamber inside for low operating torque
- Symmetric flow path with annular flow cross section in any open position
- Internal body shape is optimised to give a low head loss coefficient in fully open position



High performance seal, located in no-flow zone, easy replaceable without disassembling the valve from the pipeline. * Irrigation option shown in the picture above.



Heavy duty corrosion protection with min. 250 µm fusion bonded epoxy coating. * Irrigation option shown in the picture above.

AVK EXTENSION SPINDLES IN A USER FRIENDLY DESIGN



Extension spindles are used for easy access to operation of valves installed below ground. AVK extension spindles are produced on fully automated state-of-the-art production equipment to ensure a uniform quality.

Our extension spindles are made of corrosion resistant materials and random samples are torque tested with up to 675 Nm to ensure long service life. The inner tube is press fit to the key and stem adaptor to safeguard the corrosion protection of the tube. The bottom cover protects the valve spindle from impurities and enables it to rotate freely.

The patented "Safe Click" design provides a secure and fast three-step mounting process on service connection valves. A quick-mounting clip secures the connection between the stem and the bottom adaptor and allows for mounting and demounting without use of tools.



Fixed length design features easy shortening

Fixed length extension spindles are used when the distance between the valve and the ground surface is known so that adjustment of the length after installation is required to a limited extent or not at all.

The patented AVK design facilitates fast and easy shortening of the extension spindle. The complete adjustment of the length can be done merely by use of a hacksaw. The extension spindles are available with a pipe cover of 800-1000-1500-2000-3000 mm.

Telescopic design facilitates on-site adjustments

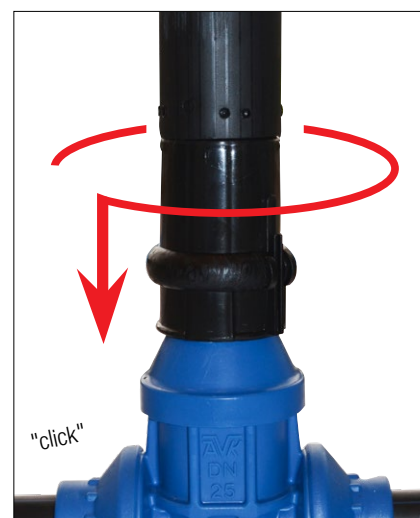
Telescopic extension spindles are used when the distance between the valve and the ground surface is unknown and when an adjustment of the extension spindle is required after installation.

The top adaptor is designed with a defrosting hole and with ears that can be fixed into AVK surface boxes and support tiles. A lock spring prevents the telescopic part from collapsing during installation, as it creates friction inside the inner tube.

The blue center sleeve protects against penetration of impurities between the two outer PE pipes.

Telescopic extension spindles with break zone

We also offer variants with break zone in the key adaptor which prevents damage of the valve in cases where a much too high torque is applied. In such cases the break nut of copper alloy is easily replaced, and the extension spindle can still be operated by means of a #20 socket wrench. Spare part sets are available.



AVK SURFACE BOXES A FULL RANGE



AVK offers a very comprehensive range of surface boxes in various designs and material combinations.

Cast iron surface boxes

The ductile iron surface boxes are available in a floating design and a fixed/floating reversible design. The reversible surface box allows for deflection and internal fixation of telescopic extension spindles from both ends.

The fixed surface boxes of grey cast iron are height adjustable using ductile iron distance rings of a height of 10-50 mm.

Floating surface boxes with great flexibility

The internal fixation of telescopic extension spindles enables height adjustment after installation. The deflection ability secures optimal fit on sloped surfaces.

The large chamber provides easy access for mounting and demounting of the extension spindle, and the closed design protects the extension spindle against impurities.

- Square or round surface plate
- Body of polyamide PA-6 or ductile iron
- Surface plate and lid of ductile iron with black epoxy or blue epoxy coating.



Synthetic surface boxes

Synthetic surface boxes are lightweight, ensuring safe and easy handling in compliance with Health and Safety Regulations.

They are maintenance and corrosion free giving easy access throughout the year with no need to clean or grease the seat to protect against corrosion or frost.

Furthermore, they are silent in traffic zones as the synthetic material absorbs noises, and they are 100% recyclable and heat resistant to max. 250°C.

Designed for tough conditions

The housing is made of PA+ (polyamide with additives) making the surface box suitable for heavy duty application areas in all seasons and conditions.

The material has high impact resistance at low temperatures and is sufficiently heat resistant for safe installation in tarmac roads. The ribs in the housing ensure optimal fixation in the road foundation.

Height adjustable surface boxes

AVK offers a wide range of DIN DVGW approved height adjustable surface boxes specifically designed for tarmac installation. They enable easy and precise installation thanks to flexible positioning of the top part.



Height adjustable surface boxes prevent costly correction after installation and save time and money when roads are renovated.

The variants with reinforced rim offer increased support of the top part making them even more robust and suitable for heavy duty areas.

Fixed height surface boxes

Our Classic fixed height surface boxes are DIN DVGW approved and designed to withstand heavy traffic loads. Therefore, they are often used in medium and heavy duty areas.

Our Futura range is a lightweight and price competitive version and is often used in light to medium duty areas.

Support tiles and top frames

Support tiles significantly increase the support required by surface boxes in weak soils. They also prevent telescopic extension spindles from being pushed back.

Top frames protect surface boxes in green zones and improve the visibility of the surface box. With a top frame, grass will not overgrow the surface box and combined with a support tile, easy access to valves installed below is guaranteed.



Recognisable synthetic lids

Lids made of synthetic material are corrosion free, unattractive to thieves, more aesthetic and lightweight, and in compliance with Health and Safety Regulations.

To prevent the lid from being lifted by the suction of a passing vehicle, the reduced weight is compensated for with a locking clip around the bolt. Furthermore, AVK offers a solution that makes the surface box easily detectable by means of a ferromagnetic detector.



AVK COUPLINGS AND FLANGE ADAPTORS

UNIVERSAL AND DEDICATED



AVK offers a wide range of universal and dedicated couplings, flange adaptors and end caps designed for easy installation.



Three Supa® ranges

AVK offers three great ranges:

- Supa® - universal and non-tensile
- Supa Plus™ - dedicated and tensile for PE/PVC
- Supa Maxi™ - universal and tensile

Supa® - universal

- $\pm 4^\circ$ angular deflection
- Drinking water approved EPDM gasket with moulded ribs absorbs minor imperfections in the pipe
- Straight couplings, step couplings and flange adaptors in DN40-600

Supa Plus™ - tensile for PE/PVC

- $\pm 3.5^\circ$ angular deflection
- Combined gasket of drinking water approved EPDM rubber with tensile grip segments
- The compression type gasket makes it easy to insert the pipe, even in large dimensions
- Straight couplings, flange adaptors, end caps and gate valves in DN40-300

For both types:

- External bolt design prevents corrosion between sleeve and bolts
- Anti-friction coated bolts and nuts

Supa Maxi™ - universal and tensile

Supa Maxi™ is a complete range of large tolerance universal tensile couplings and adaptors according to EN 14525. The range comprises straight couplings and flange adaptors in DN50-600, end caps in DN50-400, step and transition couplings in DN50-300, and gate valves in DN80-300.

Supa Maxi™ sets a new standard with its unique features:

- Fully universal and tensile on all pipe materials, and even on oval pipes
- Patented SupaGrip™ sealing support system with flexible bracket
- PN16 in all dimensions (WP -0,9 to 16 bar)
- $\pm 4^\circ$ (8°) angular deflection on each side
- Permanent protection caps protect during handling and installation
- No re-tightening of bolts
- Lifting eye from DN100
- Fusion bonded epoxy coating in compliance with DIN 3476 part 1 and EN 14901, GSK approved
- Gasket of EPDM approved for drinking water
- Temperature range -20°C to $+70^\circ\text{C}$

AVK combi-flanges

The range comprises tensile combi-flanges for PE/PVC and ductile iron pipes in DN50-300, non-tensile for PVC and ductile iron pipes in DN50-600, and non-tensile for steel pipes in DN50-300.

- The design features flexible positioning and chamfering of the pipe
- Up to $\pm 3.5^\circ$ deflection of the pipe is possible even in tensile executions
- The pipe will not move inwards during installation which secures a tight connection

Dismantling joints

AVK dismantling joints provide easy installation and disassembly of flanged pipework and equipment and compensate for axial displacement of the pipe during installation and dismantling. The range is available in DN50-2200 in PN10 and 16, and optionally PN25.

AVK's expansion joint is suitable for connecting fixed flanged ends of a pipeline, and for accommodating axial length variation of a pipeline. It can be used for all pipe materials.

Fabricated couplings

AVK's range of dedicated fabricated couplings comprises non-tensile straight couplings, step couplings and flange adaptors in DN350-2000. The range is suitable for ductile and grey cast iron, steel, uPVC and GRP pipes for water and wastewater applications up to 25 bar.

Our range of universal fabricated couplings comprises non-tensile straight couplings and flange adaptors in DN400-2000 made in carbon steel and feature a wide tolerance of 30 mm up to DN450 and 40 mm from DN500. Optionally the universal couplings and adaptors are available in stainless steel, up to PN40 and in customised design.

Repico® couplings

The Repico® range consists of stainless steel universal couplings in tensile and nontensile versions. Repico® offers a quick and simple connection solution for all pipes with possibility of angular deflection and easy handling due to the compact and light-weight design. The range is available from DN15 and up to DN2000, and with EPDM as well as NBR sealings.

See separate brochure "AVK couplings and adaptors" for further details.



FLANGED GATE VALVES FOR IRRIGATION

DOUBLE ECCENTRIC AND CENTRIC BUTTERFLY VALVES FOR IRRIGATION



Series 06/30
Flanged gate valve
Face-to-face DIN F4
DN40-1000
PN10/16
Ductile iron

- Options:
- internal enamel
 - duplex stem
 - replaceable stem sealing



Series 06/52
Premium 100 gate valve
Flanged
Face-to-face DIN F4
DN40-600
Ductile iron
External PUR coating



Series 06/35
Flanged gate valve
with position indicator
Face-to-face DIN F4
DN50-400
PN10/16
Ductile iron

- Options:
- face-to-face DIN F5



Series 02/20
Flanged gate valve
Face-to-face BS
DN50-400
PN10/16
Ductile iron



Series 756/100
Butterfly valve
Double eccentric
Double flanged
Integral seat
IP 67 gearbox
DN150-2800
PN10/16
Ductile iron

- Options:
- stainless steel seat
 - PN25 in DN150-1200
 - internal enamel



Series 756/106
Butterfly valve
Double eccentric
Double flanged
Integral seat
IP 68 gearbox
DN150-2800
PN10/16
Ductile iron

- Options:
- stainless steel seat
 - PN25 in DN150-1200
 - internal enamel



Series 756/102
Butterfly valve
Double eccentric
Double flanged
Stainless steel seat
ISO input gearbox
DN150-2800
PN10/16
Ductile iron

- Options:
- integral seat
 - PN25 in DN150-1200



Series 15/42
Flanged gate valve
with ISO top flange for actuator
Face-to-face DIN F4
DN40-400
PN10/16
Ductile iron

- Options:
- face-to-face DIN F5



Series 02/60
Flanged gate valve
Face-to-face DIN F5
DN40-500
PN10/16
Ductile iron

- Options:
- internal enamel
 - PN25
 - duplex stem
 - to GOST



Series 02/75
Flanged gate valve
Face-to-face DIN F5
Replaceable stem sealing
DN40-500
PN10/16
Ductile iron

- Options:
- PN25



Series 75/10
Butterfly valve
Centric with fixed liner
Wafer type
DN40-1400
PN10/16
Ductile iron

- Options:
- various actuators



Series 75/31
Butterfly valve
Centric with fixed liner
Semi-lug type
DN50-200
PN10/16
Ductile iron

- Options:
- various actuators



Series 75/41
Butterfly valve
Centric with fixed liner
Full lug type
DN50-1200
PN10/16
Ductile iron

- Options:
- various actuators



Series 02/52
Premium 100 gate valve
Flanged
Face-to-face DIN F5
DN40-500
Ductile iron
External PUR coating



Series 55/30
Flanged gate valve
DN450-500-600-800
Face-to-face DIN F5
PN10/16
Ductile iron
Resilient seated
Replaceable stem sealing

- Options:
- DN80 By-pass



Series 38/80
Gate valve
with flange/PE end
DN50-200
Ductile iron
PE100/SDR11

- Options:
- PE100/SDR17



Series 75/20
Butterfly valve
Centric with fixed liner
Double flanged short
DN50-2000
PN10/16
Ductile iron

- Options:
- various actuators



Series 75/21
Butterfly valve
Centric with fixed liner
Double flanged long
DN50-1500
PN10/16
Ductile iron

- Options:
- various actuators



Series 820/00
Butterfly valve
Centric with loose liner
Wafer type
DN25-1000
PN10/16
Ductile iron

- Options:
- various actuators



Series 54
Flanged gate valve
DN700-800-900
Face-to-face BS
PN10/16
Ductile iron
Metal seated

- Options:
- DN80 By-pass



Series 36/80
Gate valve
with PE ends
DN65-500

Od75-630 mm
Ductile iron

- Options:
- SafeTech ends
 - duplex stem



Series 36/52
Premium 100 gate valve
with PE ends
DN65-400

Od75-400 mm
Ductile iron

- Options:
- Black/blue pipe ends up to 630 mm



Series 820/10
Butterfly valve
Centric with loose liner
Lug type
DN25-600
PN10/16
Ductile iron

- Options:
- various actuators



Series 820/20
Butterfly valve
Centric with loose liner
U-section type
DN150-1600
PN10/16
Ductile iron

- Options:
- various actuators



Series 813/80
Butterfly valve
Centric with loose liner
Double flanged short
DN350-600
PN10/16
Ductile iron

CONTROL VALVES, NEEDLE VALVES. CHECK VALVES, AIR VALVES AND FLOAT VALVES

VALVE ACCESSORIES



Series 859
Control valve
Pressure reducing
DN50-600
PN10/16
Ductile iron/AISI 316



Series 859
Control valve
Pressure sustaining
DN50-600
PN10/16
Ductile iron/AISI 316



Series 859
Control valve
Constant flow
DN50-600
PN10/16
Ductile iron/AISI316



Series 04/02
Extension spindle for
gate valves
Fixed length
DN40-400



Series 04/04
Extension spindle for
gate valves
Telescopic
DN40-600

Options:
• with break zone



Series 04/05
Extension spindle for
service connection
valves
Fixed length
DN25-50



Series 872
Needle valve
DN 80-1600
PN 10/16/25/40
Stainless steel DN80-150
Ductile iron from DN200

Options:
• various actuators and
accessories
• up to PN100 and
DN2000



Series 41/36
Swing check valve
Metal seated
Closed bushings
DN350-600
PN10/16
Ductile iron

Options:
• free shaft



Series 41/23
Lever and weight kit
for swing check valve
DN50-300
Ductile iron



Series 04/07
Extension spindle for
service connection
valves
Telescopic
DN25-50



Series 756/7
Extension spindle for
double eccentric butterfly
valves
Telescopic
DN200-1200



Series 04/15
T-key for gate valves
DN40-400



Series 41/32
Spring kit
for swing check valve
DN50-300



Series 41/1
Guard kit
for swing check valve
DN80-300



Series 874
Tilting disc check valve
With lever and weight
DN150-1600
PN10/16
Ductile iron

Options:
• hydraulic damper



Series 875
Slanted seat check
valve
DN200-1000
PN10/16
Ductile iron



Series 04/08/55
Stem caps for gate valves
and service connection
valves
DN25-600

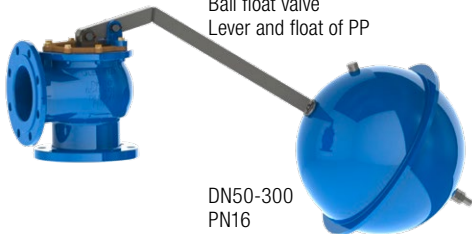


Series 08
Handwheel for gate valves
DN50-600
CTC
Grey cast iron

Options:
• CTO



Series 756/9
Handwheel for double
eccentric butterfly valves
DN200-600
Grey cast iron



Series 854
Ball float valve
Lever and float of PP

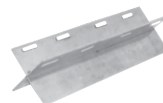
DN50-300
PN16
Ductile iron

Options:
• lever and float of
stainless steel



Series 851/41
Combination air valve
DN50-200
ABS float

Options:
• stainless steel float



Series 36/15
Valve foundation for gate
valves with PE ends
DN25-100
Steel



Series 756/5
Adaptor for connecting
gearside to extension rod,
wall post indicator or post
indicator
DN200-1200
Ductile iron



Series 910
Y-strainer
DN50-300
Ductile iron

SURFACE BOXES

SURFACE BOXES AND ACCESSORIES



Series 04/10
Fixed surface box
Grey cast iron with blue epoxy

Distance ring/square for fixed surface box

Options:
• floating



Series 04/12
Universal surface box
Reversible design
Ductile iron with blue epoxy



Series 04/43
Fixed surface box
Body of PE
Lid of cast iron



Series 80/32
Surface box according to DIN 4057 for service connection valves
Fixed height
PA+ body

Options:
• round top
• square top
• cast iron lid
• synthetic lid



Series 80/32
Surface box according to DIN 4057 for service connection valves
Height adjustable
PA+ body
Cast iron lid

Options:
• reinforced rim
• square top
• hexagonal top



Series 80/32
Surface box 4057 "Futura" for service connection valves
Fixed height
PA+ body

Options:
• round top
• square top
• cast iron lid
• synthetic lid
• hexagonal top



Series 04/007
Floating surface box for telescopic extension spindle
Body of PE
Flange/lid of ductile iron

Options:
• round – black epoxy
• round – blue epoxy
• square – black epoxy
• square – blue epoxy



Series 04/008
Floating surface box for telescopic extension spindle
Ductile iron with black epoxy

Options:
• round or square surface plate
• round or square lid



Series 04/088
Double surface box
Round and square lid with "V" inscription
Ductile iron with black epoxy



Series 80/21
Surface box "Logger" for service connection and distribution valves
Fixed height
Square top
HDPE body
Cast iron lid
PA inscription plates



Series 80/22
Surface box Multi Purpose for service connection valves
Round top
PA+ body

Options:
• fixed height
• height adjustable
• cast iron lid
• synthetic lid
• inscription plate



Series 80/41
Surface box PURBRA for underground hydrants
Fixed height
rectangular top
HDPE body
Cast iron lid
PA inscription plate



Series 80/30
Surface box "Classic" according to DIN 4055 for underground hydrants
Fixed height
PA+ body

Options:
• oval top
• rectangular top
• cast iron lid
• synthetic lid



Series 80/30
Surface box "Classic" according to DIN 4055 for underground hydrants
Height adjustable
PA+ body
Cast iron lid

Options:
• reinforced rim



Series 80/30
Surface box "Futura" for underground hydrants
Fixed height
PA+ body

Options:
• oval top
• rectangular top
• cast iron lid
• synthetic lid



Series 80/40
Surface box PERA for distribution valves
Fixed height
square top
HDPE body
Cast iron lid
PA inscription plate



Series 80/42
Surface box PURDIE for service connection valves
Fixed height
square top
HDPE body
Cast iron lid
PA inscription plate



Series 80/46
Support tile for surface boxes for gate valves and service connection valves
HDPE

Options:
• large spindle fixation
• small spindle fixation
• spindle interface



Series 80/31
Surface box "Classic" according to DIN 4056 for distribution valves
Fixed height
PA+ body

Options:
• round top
• square top
• cast iron lid
• synthetic lid



Series 80/31
Surface box "Classic" according to DIN 4056V for distribution valves
Height adjustable
PA+ body
Cast iron lid

Options:
• reinforced rim



Series 80/31
Surface box "Futura" for distribution valves
Fixed height
PA+ body

Options:
• round top
• square top
• cast iron lid
• synthetic lid



Series 80/46
Support tile for surface boxes for underground hydrants
HDPE



Series 80/46
Top frame for surface boxes
HDPE

Suitable in combination with various surface boxes:
• for hydrants
• for distribution valves
• for service connection valves

SUPA MAXI™, SUPA PLUS™ AND SUPA® COUPLINGS, ADAPTORS AND VALVES

COMBI-FLANGES, FABRICATED COUPLINGS & ADAPTORS AND DISMANTLING JOINTS



Series 636
Supa Maxi™ gate valve
Universal and tensile
coupling ends for all pipes
Ductile iron
DN80-300
PN16

Options:
• Supa Maxi™/PE end



Series 631
Supa Maxi™ straight
coupling
Universal and tensile
for all pipes
Ductile iron
DN50-600
PN16



Series 632
Supa Maxi™ step
coupling
Universal and tensile
for all pipes
Ductile iron
DN50-300
PN16



Series 05
Combi-flange for ductile
iron pipes
Non-tensile
Ductile iron
DN50-300
PN10/16

Options:
• for PVC pipes



Series 05
Combi-flange for PE
and PVC pipes
Tensile
Ductile iron
DN50-300
PN10/16

Options:
• for ductile iron pipes



Series 05
Combi-flange for uPVC,
steel or ductile iron pipes
Non-tensile
Ductile iron
DN400-600 (uPVC and
ductile)
DN50-300 (steel)
PN10/16



Series 633
Supa Maxi™ flange
adaptor
Universal and tensile
for all pipes
Universal drilling
Ductile iron
DN40-600
PN10/16



Series 634
Supa Maxi™ end cap
Universal and tensile
for all pipes
Ductile iron
DN50-400
PN16




Series 635
Supa Maxi™ transition
coupling with PN10 or
PN16 pipe end
Universal and tensile
for all pipes
Ductile iron
DN50-300
PN10/16



Series 05
Combi-flange sealing for
uPVC, steel or ductile iron
pipes
Non-tensile
SBR rubber
DN400-600 (uPVC and
ductile)
DN50-300 (steel)




Series 05
Support bush for PE pipes
Suitable for Supa Maxi™,
Supa Plus™ and combi-
flanges
Stainless steel
DN50-600
PN6.3/10/16




Series 745/01
Repico® grip coupling
Universal and tensile for
all metal pipes
NBR or EPDM sealing
DN15-400
Stainless steel AISI 316

Options:
• for medium pressure
up to DN200
• for PE/PVC pipes




Series 01/70
Supa Plus™ gate valve
Tensile coupling ends for
PE and uPVC pipes
Ductile iron
DN40-300
PN16


Options:
• duplex stem



Series 621/10
Supa Plus™
straight coupling
Tensile for PE and uPVC
pipes
Ductile iron
DN32-300
PN16



Series 623/10
Supa Plus™
flange adaptor
Tensile for PE and uPVC
pipes
Universal drilling
Ductile iron
DN40-300
PN10/16



Series 745/20
Repico® slip coupling
Universal and non-tensile
for all pipes
NBR or EPDM sealing
DN15-600
Stainless steel AISI 316

Options:
• 2 locks up to DN1000



Series 258
Fabricated dedicated
straight coupling for AC,
steel, cast iron or ductile
iron pipes
Steel
DN350-2000
PN8 to 25

Options:
• step coupling
• flange adaptor




Series 265/30
Fabricated
dismantling joint
for all pipe
materials
Steel
DN300-1200
PN10/16/25

Options:
• With centre flange




Series 624/10
Supa Plus™ end cap
Tensile for PE and uPVC
pipes
Ductile iron
DN40-300
PN16

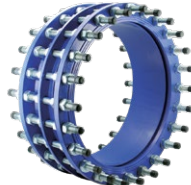


Series 601
Supa® straight coupling
universal for uPVC, AC,
steel, cast iron and ductile
iron pipes
Ductile iron
DN40-400
PN16

Options:
• Step coupling



Series 603
Supa® flange adaptor
universal for uPVC, AC, steel,
cast iron and ductile iron
pipes
Universal drilling
Ductile iron
DN40-400
PN10/16



Series 873
Dismantling joint for all
pipe materials
With centre flange
DN40-2600
PN10/16/25
Ductile iron



Series 8004
Fabricated universal
flange adaptor
Steel
DN400-2000
PN16

Options:
• straight coupling
• stainless steel



Series 8005
Expansion joint
For all pipe materials
Steel
DN80-1000
PN10/16

ENCAPSULATION COLLARS, REPAIR CLAMPS AND FITTINGS



Series 8001
Hydro Stop universal socket encapsulation collar
Steel
EPDM rubber

Options:

- Pipe encapsulation collar



Series 8002
Hydro Fast dedicated socket encapsulation collar
Steel
EPDM rubber

Options:

- Pipe encapsulation collar



Series 8003
Hydro Smart dedicated socket encapsulation collar
Steel
EPDM rubber



Series 748/01
Repair clamp
Single band
Stainless steel AISI 304 or AISI 316
NBR or EPDM rubber

Options:

- handgrip



Series 748/02
Repair clamp
Double band
Stainless steel AISI 304 or AISI 316
NBR or EPDM rubber

Options:

- handgrip



Series 748/03
Repair clamp
Triple band
Stainless steel AISI 304 or AISI 316
NBR or EPDM rubber



Series 712
Flanged bend
Ductile iron

Options:

- various types



Series 712
Flanged cross
Ductile iron

Options:

- various types



Series 712
Flanged reducer
Ductile iron

Options:

- various lengths



Series 712
Reducer flange
Ductile iron



Series 712
Blind flange
Ductile iron

Options:

- various types



Series 712
Duckfoot bend
Ductile iron

EXPECT SUSTAINABILITY



We contribute actively to the UN SDGs

Our solutions contribute to the UN sustainable development goals by ensuring clean water and sanitation, by reducing water waste, electricity consumption and CO2 emissions, and by turning wastewater into affordable and clean energy. Our valve design is not only optimised to ensure long durability and 100% tightness; it also offers low operating torque, allowing for the use of cost-efficient electrical actuators.

AVK has entered into partnerships with other leading Danish companies aimed at sharing knowledge within water technology and at offering joint solutions for a more sustainable world. Furthermore, to help implement the already known and well-proven technologies, we have founded and host a summer school which runs under the name "Advanced Water Cycle Management Course". With the latest knowledge at hand and a holistic approach to the journey of water through society, we focus on obtaining the most efficient supply and treatment processes.

Sustainable production

At the AVK Advanced Castings foundry, supplying the AVK Group with castings for valves and hydrants and other metal castings, we use the innovative lost foam method, and this method allows for an improvement in performance, reducing energy consumption and the amount of particle emissions into the atmosphere. In our castings, we use recycled

steel scrap as the principal component – up to 85-90% of the total melt.

The AVK Group has strict requirements and standards for energy and water consumption its production companies must meet. Consequently, all companies make great efforts to reduce consumption wherever they can.

Global responsibility

AVK is a global company operating worldwide and must as such take different circumstances and conditions in different countries into account and the consequent risks. In all countries where AVK is present, it is fundamental to act responsibly towards employees, environment and the surrounding society.

The AVK Group keeps a close watch on all business units and ensures through regular visits that all AVK companies comply with the defined human rights principles and criteria. Whatever country or location, we focus on the health and safety of our employees. We carefully monitor the number of work-related accidents and work proactively on preventive measures. The result of this is a steady decline in the number of accidents. We also ensure maintenance, inspection and development of working conditions, equipment and tools that are necessary to complete a given business process.

The AVK Group has agreed to adhere to standards that our suppliers must adhere to as well in order to become a certified supplier of the Group. Sustainability is vital for us throughout the entire supply chain. Therefore, we only cooperate with partners with high ethical standards, who are strongly committed to comply with international legislation in the field of labour.

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Expect... **AVR**