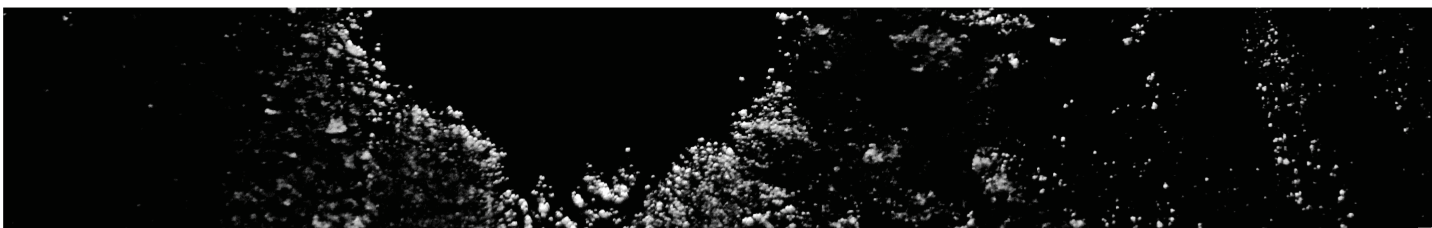
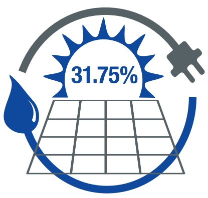
AVK SA MINING SOLUTIONS

INDUSTRIAL MINING SOLUTIONS

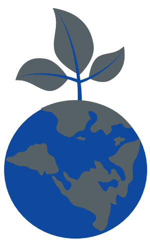


AVK YOUR LONG-TERM PARTNER

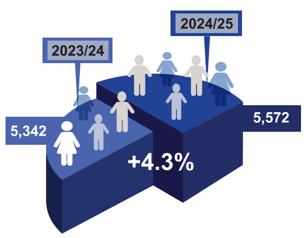
AVK Valves Southern Africa is ready to captain industry for the decades to come. Anchored by unwavering customer support, AVK is ready to be your dedicated partner for your future success and growth.



SHARE OF
renewable energy



SUSTAINABILITY
function established



NUMBER OF
employees

AVK PRODUCTS MEET LOCAL MINING SOLUTIONS IN SOUTH AFRICA

The mining sector accounts for a major portion of the country's earnings of foreign exchange and continues to attract valuable foreign direct investment to the rainbow nation.

Major mining sectors in Southern Africa include coal, platinum, gold, copper, zinc, maganese, diamonds and iron ore. For AVK, there is always an opportunity to deliver more than just products but collaborative solutions to the Southern African mining industry.

WHO WE ARE

AVK Southern Africa (AVK SA) is situated in a well secured, 46000 sqm corner site in Alrode, Gauteng, South Africa and easily accessible from the R59 highway. As part of the global AVK Group that manufacture and supplies in countries worldwide, this is a privately-owned company and Africa's leading manufacturer of valves, hydrants and accessories.

Specialising in water and industrial applications, AVK SA has strengthened its commitment to offer more local content within its existing product program, offering local content up to 100% for certain products and meeting the 70% minimum local content requirements with ease.

Recognising compliance to the Mining Charter and local content designation is an unquestionable priority for AVK SA. Home to a modern corporate office, dedicated distribution center based in Gauteng and Cape Town, a professional in-house training facility that supports skills transfer programs, ensures the Sales, Distribution, After Sales and Refurbishment service of the AVK products brands.

MINING: FROM EXTRACTION TO TRANSFORMATION

Mining is the backbone of industrial growth, providing the essential raw materials that drive infrastructure development, manufacturing, and energy production. From steel and copper to precious metals, mining fuels progress and underpins modern economies

As global demand for resources continues to rise, mining operations face increasing pressure to prioritize efficiency, safety, and sustainability. Success in this sector depends not only on extracting minerals but also on managing complex processes that ensure responsible resource use and environmental stewardship.

Key Processes in Mining

- **Cementation:** Cementation is a chemical process used to recover metals from solution, often employed in hydro metallurgical operations. It plays a key role in refining and ensures that valuable resources are reclaimed efficiently.
- **Tailings and Slurry Pipelines:** These pipelines are vital for transporting abrasive waste and process material safely across mining sites. By ensuring controlled flow and system integrity, they reduce environmental risks and support efficient mineral processing.
- **Concentration:** Concentration separates valuable minerals from waste material, increasing product purity and maximizing yield. Advanced techniques such as flotation, gravity separation, and magnetic separation help reduce environmental impact while optimizing resource recovery.
- **Smelter Operations:** Smelting transforms raw ore into refined metals through high temperature processing. This critical stage demands precision, durability, and safety, as it involves extreme heat, corrosive media, and abrasive slurries.

The Extraction Phase

Extraction is the foundation of mining, encompassing the identification, exploration, and removal of mineral deposits. Modern extraction techniques range from open-pit and underground mining to more specialized methods such as solution mining and dredging. Each approach requires careful planning to balance economic viability with environmental impact. Advances in geospatial mapping, automation, and remote sensing have revolutionized this stage, enabling companies to locate deposits more accurately and reduce waste.

The Transformation Phase

Once minerals are extracted, they undergo a series of processes—crushing, grinding, smelting, refining, and chemical treatment—that transform raw ore into usable materials. This transformation is where mining intersects with metallurgy, chemistry, and engineering. The efficiency of these processes determines not only the profitability of mining operations but also their environmental footprint. Innovations such as cleaner smelting technologies, recycling of tailings, and the use of renewable energy in processing plants are reshaping the industry toward sustainability.

Beyond the Mine: Integration and Responsibility

Mining today is not confined to the physical act of extraction and transformation. It is deeply intertwined with global supply chains, local communities, and ecological systems. Responsible mining requires companies to engage with stakeholders, uphold labor standards, and mitigate environmental damage. Rehabilitation of mined land, water management, and biodiversity conservation are now integral to mining strategies. Furthermore, the industry is increasingly adopting circular economy principles, seeking to minimize waste and maximize resource efficiency through recycling and re-use.

CEMENTATION: STRENGTH BENEATH THE SURFACE

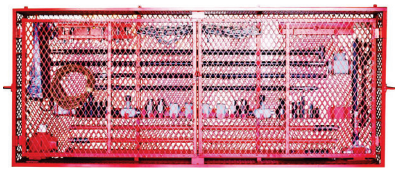
Cementation is a cornerstone of underground mining, providing the structural reinforcement needed to stabilize shafts, tunnels, and stopes. By injecting cementitious grout into rock formations, mining teams secure ground integrity, prevent collapses, and create safe working environments. This process is not only about safety it is about enabling deeper exploration and ensuring long-term operational success.

The Cementation Process

Cementation involves mixing and pumping specialized grouts into underground cavities and fractures.

The process must deliver:
- **Safe Grouting:** Controlled injection to fill voids and stabilize rock.
- **Structural Integrity:** Reinforcement that withstands geological pressures.
- **Operational Efficiency:** Seamless integration with mining workflows to minimize downtime.

Every stage demands precision, reliability, and robust equipment to ensure consistent results in challenging underground conditions.



AVK Valves Southern Africa: Integrated Solutions

At AVK Valves Southern Africa, we understand that underground cementation leaves no room for error. Our integrated system—from pumps and mixers to valves and delivery pipes ensures:

- **Precision Flow Control:** Valves engineered to regulate grout delivery with accuracy.
- **Durability:** Materials designed to withstand abrasive mixtures and high pressures.
- **Safety Assurance:** Leak-free performance that protects workers and operations.
- **Efficiency:** Streamlined systems that reduce maintenance and maximize productivity.

With AVK's cementation solutions, mining teams can explore deeper and build stronger with confidence. By combining advanced engineering with reliability, AVK Valves Southern Africa supports safe, sustainable, and efficient underground operations. Cementation is more than reinforcement it is the foundation of safe mining progress.

Key Products:
- **Cementation** - Cock Valves
- **Cementation** - Grouting Pumps
- **Cementation** - Water Safety Board
- **Cementation** - Telescopic Pipes

CEMENTATION - VALVES

Series 6127/06-001
Cementation High pressure
Plug/Cock Valve, 1½" bore
(40 mm), 2" hub for hub
clam, copper seal, nylon packing
Steel

Series 6127/07-001
Cementation High pressure
Plug/Cock Valve, 2" bore
(55 mm), 2" x 2½" female/male
BSP, nitrile seal, nylon packing
Steel

Series 6127/08-001
Cementation High pressure
Plug/Cock Valve, 2" bore
(46 mm), 2" female BSP, nitrile
seal, nylon packing
Steel

Series 6127/09-001
Cementation High pressure
Plug/Cock Valve, 2" bore
(42 mm), Od235mm / ASA600
connection, nitrile seal, nylon
packing
Steel
F/F 260 mm.

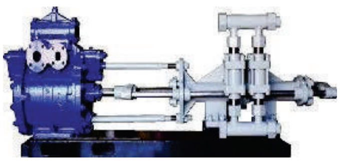
Series 6127/11-001
Cementation High pressure
Plug/Cock Valve, 2½" bore
(63.5 mm), 3" female
BSP, nitrile seal, nylon packing
Steel

Series 6127/12-001
Cementation High pressure
Plug/Cock Valve, 3" bore
(77 mm), 3" thread female/male
BSP, nitrile seal, nylon packing
Steel
Also available in 80mm bore
(blue colour)

Series 6127/13-001
Cementation High pressure
Plug/Cock Valve, 2" bore
(55 mm), 2" x 2½" female/female
BSP, nitrile seal, nylon packing
Steel

Series 6127/15-001
Cementation High pressure
Plug/Cock Valve, 3" bore
(80mm), 3" X 4" female/male
BSP, nitrile seal, nylon packing

Series 6127/16-001
Cementation High pressure
Plug/Cock Valve, 2" bore
(55mm), 2" x 2½" female/male
BSP, nitrile seal, nylon packing



CEM - MK V HP
Grouter and Cementation pump
Pneumatic & 14",
Air end with Base

Ram stroke: 300mm
Ideal speed: 60 Cycles/min
Air inlet pressure: 552 Kpa (80psi)
Approx volumetric efficiency: 80%
Approx pump weight: 1200kg
Options
Hydraulic

Double Drum Mixing Grout
Capacity: 275L
Driven by 3/4hp, .5 kw cylinder radial type
compressed air motor
Feature to a double drum fitted with screens for
sizing. If the mixer is used for light concrete work
The air motor air line is fitted with a sand trap
and airline lubricators.
Mass 350kg
Double drum mixer is also available with
3kw electric motors instead of the air meter.

TAILINGS AND SLURRY PIPELINES

In modern mining, tailings and slurry pipelines are indispensable. They form the arteries of mineral processing plants, transporting mixtures of processed ore, waste material, and water across vast sites. By moving these abrasive and chemically aggressive slurries from concentrators to disposal or recovery facilities, pipelines ensure that operations remain efficient, safe, and environmentally responsible.

Why Tailings and Slurry Pipelines Matter

- **Safe Waste Transport:** Pipelines prevent uncontrolled discharge of tailings, reducing environmental risks.
- **Operational Efficiency:** Continuous flow of slurry supports uninterrupted mineral processing and recovery.
- **Environmental Stewardship:** Controlled transport minimizes contamination of soil and water sources.
- **Cost Management:** Reliable pipelines reduce downtime, maintenance, and the risk of catastrophic failures.

Engineering Challenges

Tailings and slurry pipelines face some of the harshest operating conditions in the mining industry:

- **High Solids Content:** Dense mixtures exert immense pressure on pipeline walls and valves.
- **Abrasive Flow:** Sharp particles wear down surfaces, demanding robust materials and designs.
- **Corrosive Chemicals:** Chemical residues in slurry can degrade pipelines if not properly managed.
- **Long Distances:** Pipelines often extend for kilometers, requiring consistent integrity and flow control.
- As mining operations expand and environmental regulations tighten, the importance of robust tailings and slurry pipelines will only grow. With advanced valve solutions, AVK Valves Southern Africa helps mining companies achieve operational success while safeguarding communities and ecosystems.

Tailings and slurry pipelines are more than infrastructure they are the lifelines of safe, efficient, and sustainable mineral processing.

Key Products
- Knife Gate Valves
- Check Valves
- Ball Check Vaves

TAILINGS AND SLURRY - VALVES

Series 779/X-084
Knife gate valve, short wafer type, VG model,
DI body, SS-304 blade,
EPDM packing, EPDM seal,
handwheel/gearbox, 6-10 bar
Ductile iron
Add: Larger Sizes and
Material available on request
Different flange drilling on
request

Series 779/65-001
Heavy duty knife gate valve, long, WG model, flanged DI body, SS-404 blade, EPDM packing, EPDM seal, handwheel/gearbox, 6-10 bar
Ductile iron
EPDM rubber
Epoxy Coating

Series 779/61-002
Knife gate valve, short wafer type, VG model, CF8M (SS-316 cast stainless steel body, SS-316 blade; EPDM packing, EPDM seal, handwheel/gearbox, 6-10 bar
Stainless steel
EPDM rubber

Series 779/68-001
Knife gate valve, long HG ModeL, flanged DI body, SS-304 blade, PTFE packing, EPDM seal,
handwheel/gearbox, class
handwheel/gearbox, cass
150, 20 bar
Ductile iron
EPDM rubber
Epoxy Coating

Larger Sizes and
Material available on request
Different flange drilling on
request

Series 53/35-005
Ball check valve, flanged, tbl. D, A2 bolts/zinc-coated A4 nuts
Face-to-face dimension according to EN 558, basic series 48
Ductile iron
NBR rubber

Series 1410/35-001
Tilting Disc Check Valve,
model RM
Face-to-face dimension according to EN 558,
basic series 16
Stainless steel
Options: Available with Counter lever and weight or spring.
Larger sizes on request

THE CONCENTRATION PROCESS

Mining is more than just extracting ore from the earthit's about transforming raw material into valuable products that fuel industries worldwide. At the heart of this transformation lies concentration, the process of separating valuable minerals from waste rock (gangue). By increasing the purity of the product, concentration maximizes yield, reduces waste, and minimizes the environmental footprint of mining operations.

What is Concentration?
Concentration is the stage in mineral processing where ore is refined to isolate the desired minerals. Since raw ore often contains only a small percentage of valuable metals, the concentration process is essential to make mining economically viable and environmentally responsible.

Key objectives of concentration include:
- **Enhancing Purity:** Increasing the proportion of valuable minerals in the final product.
- **Maximizing Yield:** Extracting the highest possible amount of usable material from ore.
- **Reducing Waste:** Minimizing the volume of tailings and environmental impact. Supporting Sustainability: Ensuring efficient use of resources and reducing energy consumption in downstream processes

The Concentration Process

Concentration employs a range of advanced techniques; each tailored to the type of ore and mineral being processed:
- **Gravity Separation:** Uses differences in density to separate heavier valuable minerals from lighter waste material.
- **Magnetic Separation:** Exploits magnetic properties to isolate minerals such as iron from nonmagnetic gangue.
- **Flotation:** Introduces chemicals and air bubbles to selectively bind valuable minerals, allowing them to float and be collected.
- **Leaching and Chemical Methods:** Dissolves specific minerals using chemical solutions, leaving impurities behind.
- **Screening and Classification:** Separates particles by size, ensuring efficient downstream processing.

The Bigger Picture
Concentration is not just a technical stepit's a strategic process that determines the success of mining operations. By refining ore efficiently, companies can:

- Deliver higher-quality products to global markets.
- Reduce environmental risks associated with waste disposal.
- Strengthen sustainability commitments in line with modern regulations.

Key Products
- Ball Valves
- Butterfly Valves
- Knife Gate Valves

CONCENTRATION - VALVES

Series 779/X-084
Knife gate valve, short wafer type, VG model,
DI body, SS-304 blade,
EPDM packing, EPDM seal,
handwheel/gearbox, 6-10 bar
Ductile iron
Add: Larger Sizes and
Material available on request
Different flange drilling on request

Series 779/65-001
Heavy duty knife gate valve, long, WG model, flanged DI body, SS-404 blade, EPDM packing, EPDM seal,
handwheel/gearbox, 6-10 bar
Ductile iron
EPDM rubber
Epoxy Coating

Larger Sizes and
Material available on request
Different flange drilling on request

Series 779/61-002
Knife gate valve, short wafer type, VG model, CF8M (SS-316 cast stainless steel body, SS-316 blade; EPDM packing, EPDM seal,
handwheel/gearbox, 6-10 bar
Stainless steel
EPDM rubber

Larger Sizes and
Material available on request
Different flange drilling on request

Series 779/68-001
Knife gate valve, long HG ModeL, flanged DI body, SS-304 blade, PTFE packing, EPDM seal,
handwheel/gearbox, class
handwheel/gearbox, cass
150, 20 bar
Ductile iron
EPDM rubber
Epoxy Coating

Larger Sizes and
Material available on request
Different flange drilling on request

Series 75/64-101
Centric butterfly valve, wafertype w/centering lugs, DI body, fixed EPDM liner, duplex disc 1.4470 and shaft 1.4462, Dif. P 16bar, orange coating, bare shaft (WW ref. EVCS-i)

Face-to-face dimension according to EN 558, basic series 20

Ductile iron

EPDM rubber

T014-C254

Options: Available in other materials and larger valve size on request

Series 53/35-005
Ball check valve, flanged, tbl. D, A2 bolts/zinc-coated A4 nuts

Face-to-face dimension according to EN 558, basic series 48

Ductile iron

NBR rubber

Series 820/00
Centric butterfly valve
Wafer type with centering lugs
Loose liner
Bare shaft
DN25-1000

Series 6142-01-001
Ball valve, IPV R523, reduced bore, 1 piece design, body WCB, ball 316 SS, RTFE seats, design to ANSI B16.10.
Manually operated

Locally manufactured

Series 6142-01-002
Ball valve, IPV R533, reduced bore, 1 piece design, body CF8M, ball 316 SS, RTFE seats, design to ANSI B16.10.
Manually operated

Locally manufactured

SMELTER OPERATIONS IN MINING: TURNING ORE INTO METALSMETER OPERATION IN MINING

Smelter operations are one of the most demanding and transformative phases in the mining value chain. By applying intense heat and specialized chemical processes, smelters convert raw ore into refined metals that power industries, infrastructure, and everyday life. This stage bridges the gap between mineral extraction and usable products, making it indispensable to modern economies.

The Smelting Process
Smelting involves several carefully controlled steps, each designed to maximize efficiency and purity:

- **Ore Preparation:** Concentrated ore is blended with fluxes and reductants to prepare it for hightemperature treatment.
- **High-Temperature Processing:** Furnaces operating at extreme heat break down ore, separating valuable metals from impurities.
- **Chemical Reactions:** Reducing agents remove oxygen and other unwanted elements, leaving behind molten metal.
- **Slag Formation:** Non-metallic byproducts form slag, which is removed to ensure metal purity.
- **Refining and Casting:** The molten metal is further purified, then cast into ingots, sheets, or other usable forms.

Each stage requires precision, resilience, and safety to ensure that the final product meets strict quality standards.

Challenges in Smelter Environments Smelters operate under extreme conditions that test the limits of equipment and infrastructure:

- **High Temperatures:** Furnaces often exceed 1,200°C, demanding materials that can withstand thermal stress.
- **Corrosive Media:** Chemical reactions produce aggressive byproducts that can degrade pipelines and valves.
- **Abrasive Slurries:** Solid particles in molten streams cause wear and tear, requiring robust engineering solutions.
- **Safety Demands:** The combination of heat, chemicals, and heavy machinery makes reliability and control paramount.

As global demand for refined metals grows, smelter operations will remain at the heart of mining and industrial progress. With robust valve solutions, AVK Valves Southern Africa empowers smelters to operate safely, efficiently, and sustainably transforming raw ore into the metals that build our world.

Key Products
- Ball Valves
- Butterfly Valves
- Gate Valves
- Knife Gate Valves

SMELTER - VALVES

Series 779/65-001
Heavy duty knife gate valve, long, WG model, flanged DI body, SS-404 blade, EPDM packing, EPDM seal, handwheel/gearbox, 6-10 bar
Ductile iron
EPDM rubber
Epoxy Coating

Larger Sizes and
Material available on request
Different flange drilling on request

Series 779/X-084
Knife gate valve, short wafer type, VG model,
DI body, SS-304 blade,
EPDM packing, EPDM seal,
handwheel/gearbox, 6-10 bar
Ductile iron
Add: Larger Sizes and
Material available on request
Different flange drilling on request

Series 779/61-002
Knife gate valve, short wafer type, VG model, CF8M (SS-316 cast stainless steel body, SS-316 blade; EPDM packing, EPDM seal, handwheel/gearbox, 6-10 bar
Stainless steel
EPDM rubber

Larger Sizes and
Material available on request
Different flange drilling on request

Series 779/68-001
Knife gate valve, long HG ModeL, flanged DI body, SS-304 blade, PTFE packing, EPDM seal,
handwheel/gearbox, class
handwheel/gearbox, cass 150, 20 bar
Ductile iron
EPDM rubber
Epoxy Coating

Larger Sizes and
Material available on request
Different flange drilling on request

Series 53/35-005
Ball check valve, flanged, tbl. D, A2 bolts/zinc-coated A4 nuts

Face-to-face dimension according to EN 558, basic series 48

Ductile iron

NBR rubber

Series 37/50
Flanged gate valve
Metal seated
BS5163
Ductile iron
PN16
Clockwise to close
DN50-300

Series 820/00
Centric butterfly valve
Wafer type with centering lugs
Loose liner
Bare shaft
DN25-1000

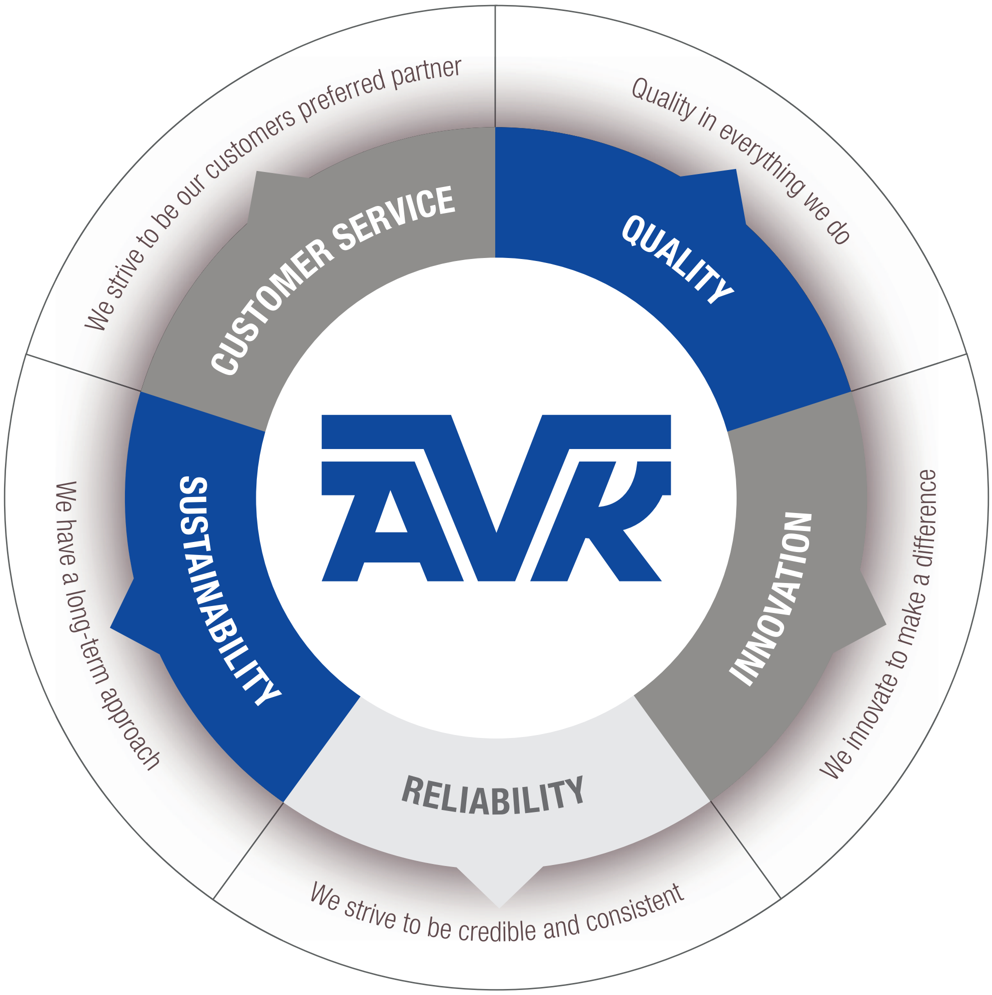
Series 6142-01-001
Ball valve, IPV R523, reduced bore, 1 piece design, body WCB, ball 316 SS, RTFE seats, design to ANSI B16.10.
Manually operated

Locally manufactured

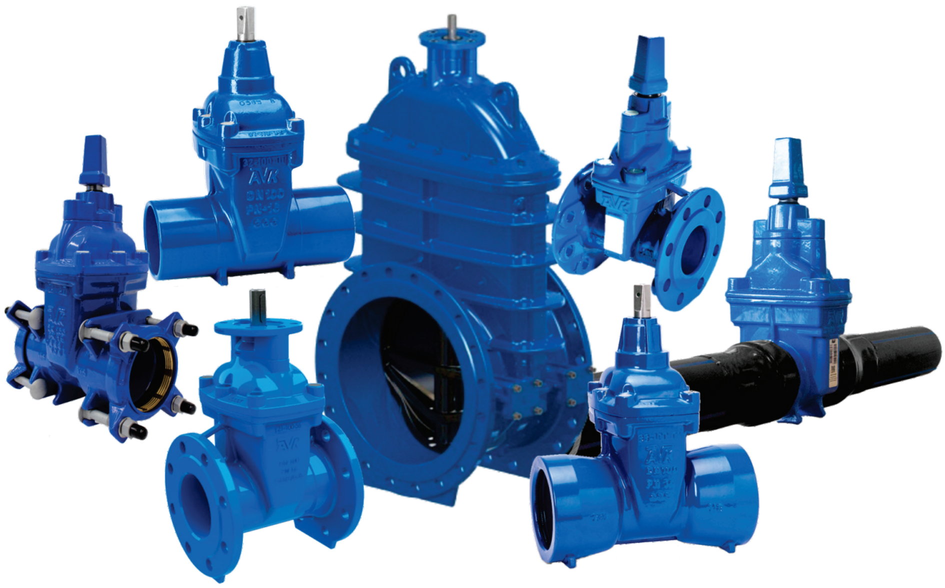
Series 6142-01-002
Ball valve, IPV R533, reduced bore, 1 piece design, body CF8M, ball 316 SS, RTFE seats, design to ANSI B16.10.
Manually operated

Locally manufactured

OUR VALUES



We strive to be our customers preferred partner
CUSTOMER SERVICE
Quality in everything we do
QUALITY
We innovate to make a difference
INNOVATION
We strive to be credible and consistent
RELIABILITY
We have a long-term approach
SUSTAINABILITY
AVK



QUALITY IN EVERY STEP

At AVK Valves Southern Africa, we implement stringent quality control measures throughout each stage of the manufacturing process.

Our products undergo type testing during the design phase to ensure they meet established criteria for strength, operation, and endurance. During assembly, we conduct dimensional and visual inspections, followed by a series of production tests in accordance with standard requirements.

Stock and distribution

AVK Valves Southern Africa's logistics center excels in managing stock and distribution efficiently. We have an extensive range of products in stock to meet our customers' requirements for both projects and day to day business.

Own Rubber Factory

AVK GUMMI, our own rubber factory, has been producing high-performance rubber components for demanding applications for more than 40 years. The manufacturing system includes precise control over each rubber compound, full traceability, SPC control, FMEA, and an exceptionally clean production environment.

Inhouse R & D

In our Development Department in Denmark, we continuously gather ideas and suggestions for new products while updating existing ones. We utilize Finite Element Analysis (FEA) to optimize the strength and geometry of our components, and Computational Fluid Dynamics (CFD) analyses to validate different product designs before creating physical prototypes. This approach allows us to predict outcomes in scenarios where full-scale physical tests are not feasible. We design and manufacture our own test and production equipment. In our flow lab, we conduct comprehensive prototype and life cycle tests before releasing products for production. Additionally, new product types are typically field-tested in collaboration with end users before their final launch.

ISO Certification - Third party Certification

AVK Valves Southern Africa operates efficiently, adhering to ISO 9001 :2015 and ISO 45001 :2018 certifications. AVK Valves Southern Africa products meet international and local specifications when required.

EXPECT US TO COMPLY TO INDUSTRY 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 recognized 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.co.za

ISO 45001:2018 SANAS Accredited Certification C 59e SACAS South Africa
ISO 9001:2015 SANAS Accredited Certification C 59a SACAS South Africa
SABS APPROVED SANS 164-1 SANS 164-2
WRAS APPROVED PRODUCT
API 6D-1745
ÖVGW CERTIFIED
DVGW Nach VP 310-1 und VP 310-2
VdS PCT UL FM ULC SVGW SSIGE NF kiwa

TECHNICAL NOTE
CORROSION PROTECTION

First all cast components are blast cleaned according to ISO 12944-4, SA 2½.

The valve and hydrant bodies and bonnets and other components are fusion bonded epoxy coating in compliance with DIN 3476 part 1 and EN 14901 and GSK guidelines. The high quality epoxy coating is GSK approved and applied manually or using a fluidized bed epoxy coating system. After the valve components have been blast cleaned, the clean and preheated components are submerged in epoxy powder. The powder melts when in contact with the preheated components and cures when the components enter the cooling tunnel shortly after the coating process.

Test procedure

- Coating thickness:
  The coating layer thickness shall be no less than 250 μ.

- Pore-free coating: The coating must be completely free of penetrating pores to avoid subsequent corrosion of the casting underneath. A 3 kv holiday detector with a brush electrode is used to electrically reveal and locate any pores in the coating.

- Impact resistance:
  The impact resistance test is carried out right after the coating process by means of a stainless steel cylinder dropped on the coating surface through a one meter long tube corresponding to an impact energy of 5 Nm.

After each impact the component is electrically tested, and no electrical breakthrough shall occur.

• Cross linkage:
One drop of methyl isobutyl ketone is put on a horizontal epoxy resin coated surface of the test piece at room temperature. After 30 seconds the test area is wiped with a clean white cloth. It is checked that the test surface has not become neither matt nor smeared, and that the cloth remains clean. The test is carried out 24 hours after the coating process.

• Adhesion:
The adhesion of the powder coating on one of each type of component is tested four times a year per coating plant according to GSK guidelines using the punch separation method according to DIN 24624. The coating thickness over a dispersed area of the test item shall be within the range 250 μ to 400 μ.

The test pieces are immersed for seven days in deionised water at 90°C, and then dried in an oven for 3 hours. A conditioning phase of 3 to 5 days in normal atmosphere is then allowed to elapse. No blisters may arise during the period immersed in the water bath.

The surface of the test piece is degreased and then roughened with abrasive paper. The roughened surface is cleaned from dust with oil-free compressed air and recleaned.
The adhesion on both the core and the moulding sand sides is tested with a minimum pulling force of >12 N/mm².

• Cathodic disbonding:
Cathodic disbonding tests are carried out on one of each type of component at least twice a year. No bubbles in the coating may develop during the test for cathodic disbonding. For this test, the coating thickness over a dispersed area of the test item shall be within the range 250 μ to 400 μ.

Approvals:
The coating is approved for use in drinking water systems, meeting all specified toxicological conditions, by the following institutes:
• Hygiene Institute, Germany
• Hydrocheck, Belgium
• CARSO L.S.E.H.L., France

Extra top coating:
All our hydrants and post indicators have an additional layer of UV-resistant polyester coating. The polyester coating will protect the colour of the products from fading, even though the products are installed in places with a strong UV-light exposure.

OUR TRAINING FACILITIES AT THE ACADEMY

AVK Holding established The Academy in September 2016. The Academy is an in-house training facility with a 40-seater seating capacity.

The institute showcases an impressive flow lab which demonstrates the flow of water through a series of valves allowing attendees to gain a comprehensive understanding of water related processes.

Get equipped through our Product Courses

Since its establishment, three product courses have been launched; The Valves Fundamentals Course, which provides a sound introduction to acquire an essential knowledge of valves, in theory and practice, and The advanced Valves Course which provides greater insight into principles and practices that address the theories of fluid pressure, fluid flow and field applications.

The Technical Training Course will further the understanding of a range issues related to industry practical problems and will broaden the horizon of design and consulting engineers, plant operators, engineering students, maintenance personnel and persons dealing with valves.

The course is registered through ECSA qualifies for 2 CPD points for professionals. (SAIMech-E -1350-01-23).

Valves function as mechanical devices to control the flow and pressure within a system or process.

They are essential components that convey different mediums in different environments. It is of paramount importance that the correct valve is specified for the right application and making the right decision makes a world of difference.

The Academy, a training institute, makes a difference in the world of valves by offering accredited courses, compiled by a team of engineers with a wealth of experience.

THE AVK GROUP
GLOBAL PRESENCE

The AVK Group is a privately owned industrial group currently comprising +100 companies worldwide.
We develop and produce valves, hydrants and accessories for water and gas distribution, sewage treatment and fire protection.

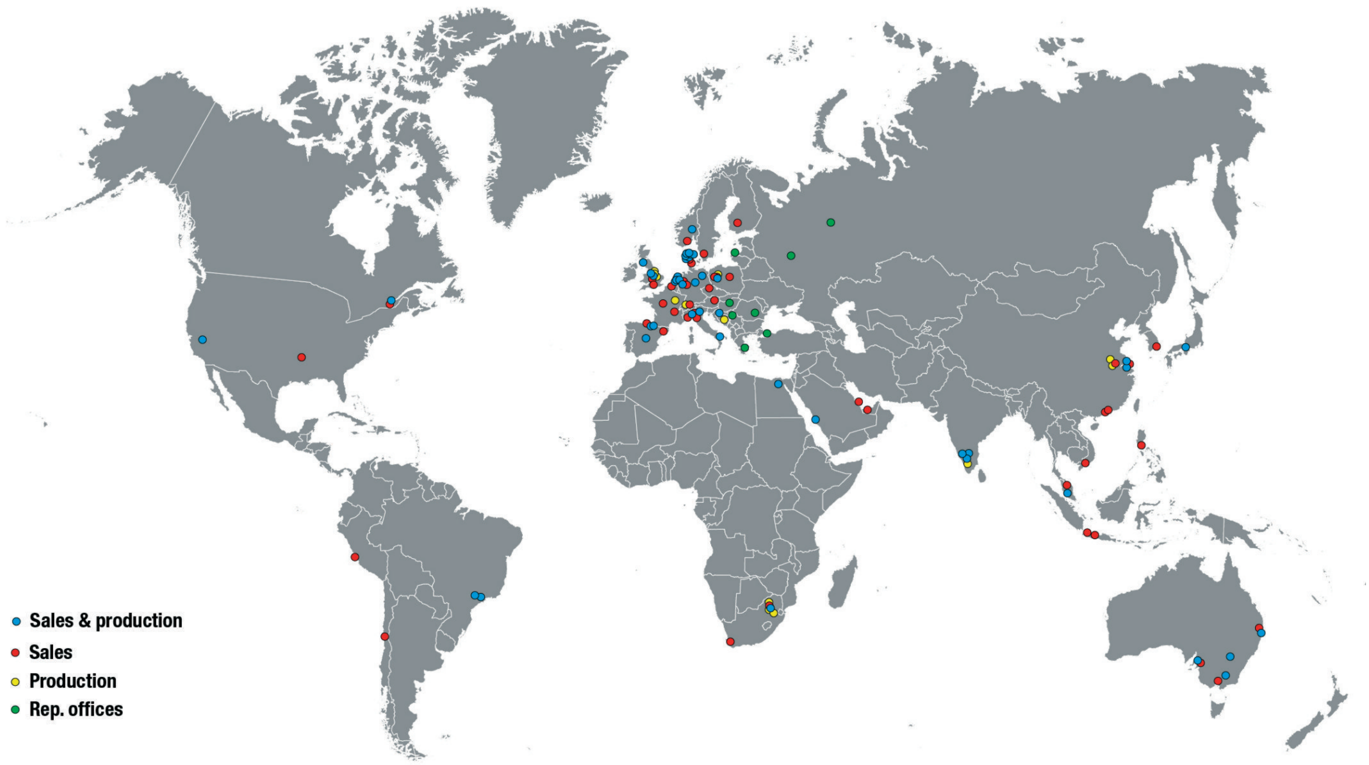
AVK has built up strong brands supplying products and solutions for various industrial sectors and within advanced manufacturing.

Our products are designed to meet international standards and are sold worldwide.

When dealing with the AVK Group expect quality, reliability, functionality and long lifetime in service.

AVK is global in scale when it comes to manufacturing and design.

We serve our customers locally, offering full-line partnership and a single entry point to a world of quality solutions.



1941	+5,572	+100	1,065
Established as a local machine shop in Denmark	Employees worldwide	Companies in the Group	Million EUR of turnover

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