

AVK CHECK VALVES - CHECKING THE FLOW



EXPECT
A LONG-TERM
PARTNERSHIP

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SERIES 53 BALL CHECK VALVES

CHECK VALVES

For Sewage Treatment Applications



AVK Ball Check Valves are available with internal thread Series 53/30 DN32-50 and with flanges Series 53/35 & 53/50 in DN50-300 (DN350-600 available on request). The basic valve design ensures easy maintenance, cost effective operation and long life.



Series 53/35 - (DN50 & DN65)
Series 53/50 - (DN80-300)
With flanges & Ductile Iron
(DN350-600 available on request)



Series 53/30
With internal BSP threads
Ductile Iron
DN32-50

The design features 100% free flow, as the ball is completely out of the valve flow path when in the fully open position.

The straight bore prevents deposits in the valve, as all impurities can pass through the valve. Consequently the AVK ball check valves feature very low head loss giving the benefits of optimum use of pump capacity.

Great installation flexibility is another essential benefit of the unique valve design. The valve can be installed both vertically and horizontally as the valve body locates the ball against the seat in either valve position.

Based on AVK's experience within the sewage treatment sector the materials selected ensure long life and optimum function under a wide range of working conditions.

The body and bonnet are made of Ductile Iron with electrostatically applied epoxy coating. Thorough control of layer thickness, adhesive strength and impact resistance of the coating

Main features and benefits:

- Minimum maintenance due to self cleaning function created by the movement of the ball.
- Easy access for maintenance in all sizes.
- No reduction of flow path - 100% free flow.
- No deposits in the valve due to the straight bore.
- Optimum sealing in both vertical and horizontal installation, as the valve bottom supports the ball against the seat.
- Long life assured with the use of high quality materials.

is maintained to ensure optimum corrosion protection.

The bonnet bolts and nuts are made of Stainless Steel A4 providing high strength and corrosion resistance. The core of the ball is made of aluminium in DN32-100 and of grey Cast Iron in DN125-300. The ball is fully vulcanised with NBR rubber which ensures optimum sealing.



The main features and benefits of the AVK Series 53 Ball Check Valve includes:

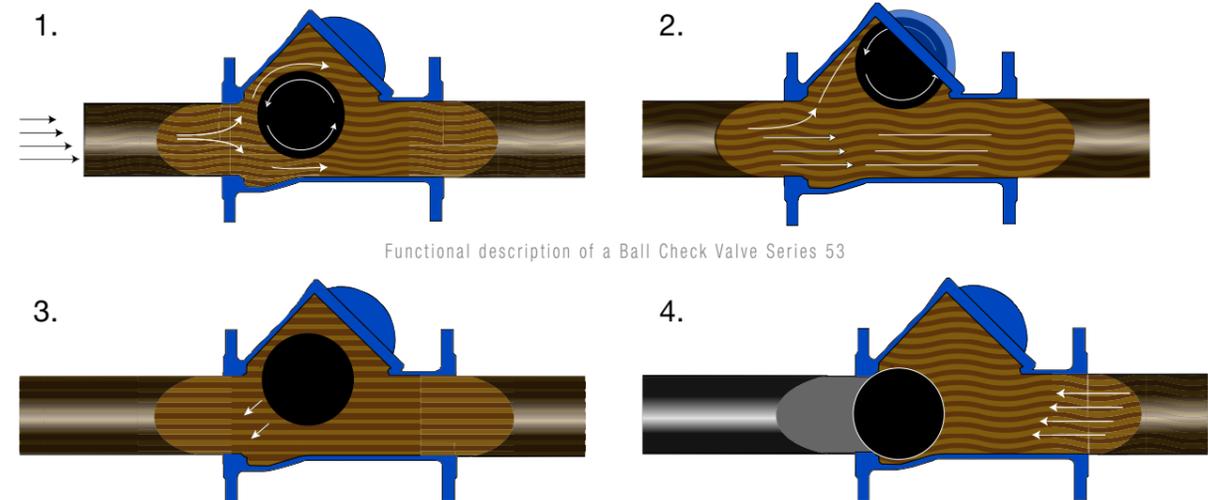
- Fully rubber coated ball prevents corrosion and ensures drip-tight closure at low pressures and long life
- Valve length is to AS 4794
- Full bore minimises pressure loss allowing maximum utilisation of pump capacity
- Full flow equal to nominal size
- Self cleaning due to rotating ball
- No accumulation of deposits
- No need to remove valve body from pipeline for maintenance



A horizontal installation requires a minimum flow velocity of 1 - 1.5 m/s to open effectively. A recommended back pressure of 0.6 bar is needed when closing the valve.



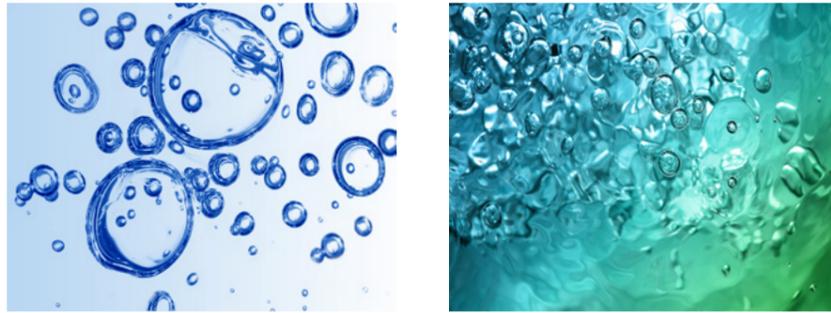
The ideal placement of the ball check valve is in the vertical position.



The AVK ball check valves are as standard supplied with a hollow Cast Iron or aluminium core vulcanised with an NBR liner.

SERIES 41 SWING CHECK VALVES

For Water and Sewage Applications
AS 4794: DN80-300
PN16



The AVK Series 41 Swing Check Valve delivers a number of significant features and benefits including:

- Low head loss when fully open
- Can be fully maintained and serviced without the need to remove the body from the pipeline.
- Fully rubber coated disc prevents corrosion and ensures drip-tight closure and long life
- Full bore prevents pressure loss allowing maximum utilisation of pump capacity
- Available with or without lever and weight
- Other options available complete with limit switch

Resilient seated disc with Stainless Steel hinge.

The valve is ideal for installation in the horizontal position and used where there is an insignificant risk of water hammer. This design features a distinctly low head loss and is used in installations, where the dry matter percentage is max. 10%. Optimum sealing at not less than 0.5 bar pressure. The valve is suitable for underground installation.

Swing check valve with external lever and weight.

For installations with an insignificant risk of water hammer, but where the minimising of head loss is important. The lever is also useful as an indicator of the valve disc position. The valve is suitable for horizontal and vertical installations.

Swing check valve with external lever and weight plus limit switch.

Cam operated IP66 limit switch. Mechanical roller plunger with the ability to easily set the cam at any given position. Maintenance free and vibration resistant cage clamp terminals.

Large diameter metal seated check valve.

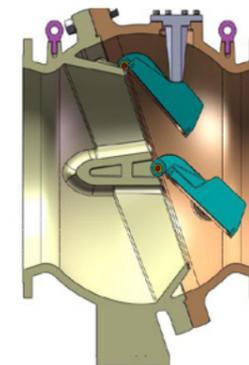
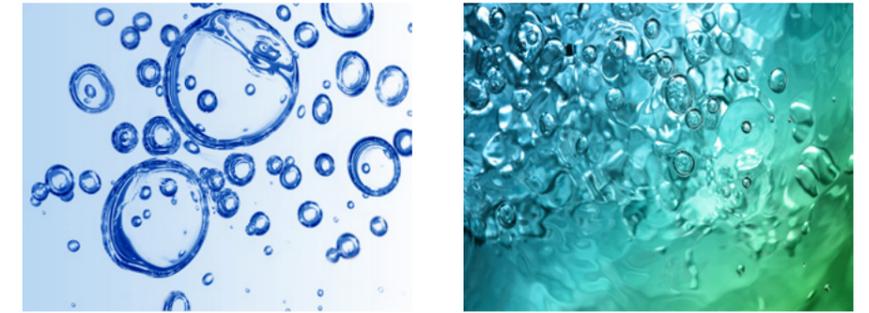
This valve is ideal for potable water and sewerage applications and suitable for temperatures up to 60°C.

The body, bonnet, hinge and metal seated disc are all constructed with high grade Ductile Iron to EN 1563, EN-GJS-500-7. The seat is aluminium bronze.

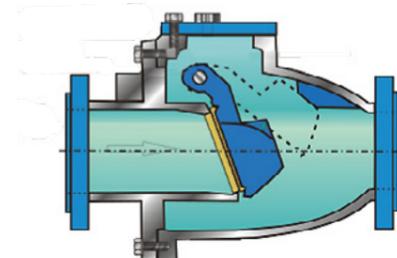


To achieve the optimum performance from any swing check valve, a velocity of 1.5 to 2m/s is required to fully open the valve, and to reduce turbulence a straight piece of pipe five (5) times

SERIES 641 RECOIL NON SLAM CHECK VALVES



2 Door
641/21 DN600-800



Single Disk
641/11 - DN100-500

The AVK single and multi door 'Recoil' high performance non-return valve has been designed after extensive practical hydraulic laboratory testing. These in-house tests have led to the development of a superior check valve that will close the instant forward flow ceases.

The 'Recoil' valve will close in under one second thus eliminating the opportunity for water hammer. Incorporated into design features are the angle of the seat face, the restricted travel of the disc, the weight distribution within the disc and the body profile.

Since a self-acting reflux valve can only close under the action of the force due to gravity, and since the inertia of the moving parts has to be overcome, the actual acceleration of the door is necessarily less than 'g'.

But the water column is in contact with the door, thus if the acceleration of the water column is greater than 'g' it is obviously impossible for the door to close more quickly than the column can reverse. It is therefore of vital importance to design a non-return valve intended to work in extreme conditions, in such a way that every mechanical and hydraulic assistance is directed towards accelerating the movement of the door.

This has been done in the Glenfield "Recoil" valve; mechanical assistance is given by a combination of inertia reduction, concentration of mass, ideal suspension of the moving elements and by localising the movement in a particular portion of the water stream.

Hydraulic assistance is given by the avoidance of cavitation and by a novel provision for forward and recoil water streams within the body and around the valve door.

Features:

- Metal seated valve with gunmetal body seats and gunmetal faced doors
- Non slam operation
- No additional damping required
- By-pass bosses as standard
- Epoxy coating
- Rapid closure

Options:

- PN25 version
- By-pass
- Limit/proximity sensors
- Alternative trim
- Larger Sizes
 - 900, 1000, 1200 with 3 Door
 - 1600, 1800 with 4 Door



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Expect... **AVK**