



## AVK SERIES 53 BALL CHECK VALVES INSTALLATION, OPERATION & MAINTENANCE MANUAL



### Instruction for use

Thank you for selecting an AVK product. With correct use, the product is guaranteed to deliver a long and reliable service. This manual has been prepared to assist you with the installation, operation and maintenance of the valve to the maximum efficiency. For ease of reference, it has been divided into sections covering all aspects of use, and it is in the users best interests to read it and ensure that it is fully understood.



### Health and Safety

It is always recommended that wherever work is being carried out on a valve that the valve is fully depressurised prior to carrying it out, and for the convenience draining of the line may be beneficial.

It is essential that the user of the valve is aware of the weight of the components and/or assemblies that must be handled and manipulated during installation and maintenance. It is the users responsibility to ensure that safe working practices are followed at all times.

Whenever AVK products are installed, operated, or maintained, it is essential that the staff that undertake these operations be adequately trained. The hazards of pressurised liquids and gases can be severe, and it is the responsibility of the users to ensure that trained, competent staff undertake these duties. This manual has been designed to assist, but it can never fully replace quality training in the workplace. AVK technical staff will always be available to answer any questions relating to specific problems that may not be covered by this manual.

AVK products are designed and manufactured to be fit for purpose, and to a high and reliable standard. This provides a safe product with minimum risk to health when used correctly for the purpose for which it was designed. However, this assumes that the equipment is used and maintained in accordance with the manual, and the user is advised to study this manual, and to make it available to all staff that may need to refer to it.

AVK cannot be held responsible for any incidents arising from incorrect installation, operation or maintenance. The responsibility for this must rest wholly with the user.

# AVK SERIES 53 BALL CHECK VALVES INSTALLATION, OPERATION & MAINTENANCE MANUAL

## 1. Introduction

AVK ball check valves are designed and manufactured for the prevention of flow reversal and are suitable for potable water or sewage applications. The operation of the valve is fully automatic allowing liquid to flow in one direction only.

The valves are 100% factory tested hydrostatically.

### Materials:

**Castings (body and cover)**  
Ductile Iron

**Coating**  
Fusion bonded epoxy (FBE)

**Ball**  
DN32 to DN100: Aluminium, vulcanised with NBR rubber  
DN150 to DN300: Grey Cast Iron, vulcanised with NBR rubber

**Bolts, nuts and washers**  
Stainless Steel

Refer to individual datasheets for specific information

Series 53/30	DN32-50
Series 53/35	DN50-65
Series 53/50	DN80-300



53/30



53/35



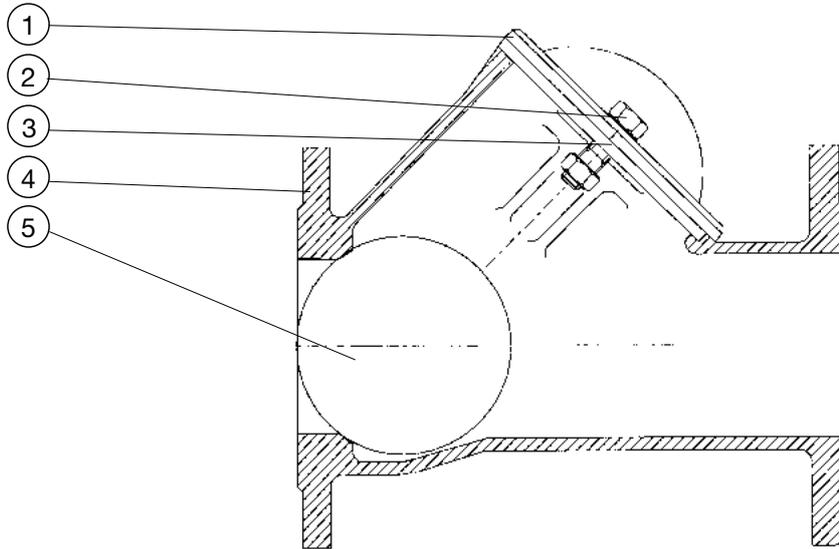
53/50

# AVK SERIES 53 BALL CHECK VALVES INSTALLATION, OPERATION & MAINTENANCE MANUAL

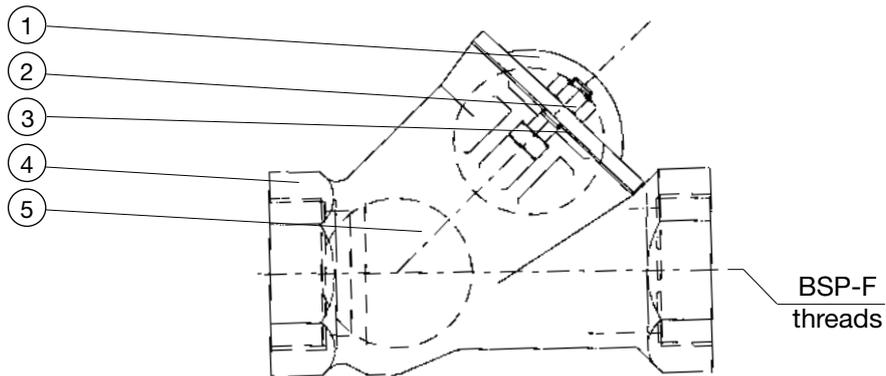
## Component list

- |                    |           |         |
|--------------------|-----------|---------|
| 1. Cover           | 3. Gasket | 5. Ball |
| 2. Bolt/nut/washer | 4. Body   |         |

### Series 53/50 & 53/35



### Series 53/30



# AVK SERIES 53 BALL CHECK VALVES INSTALLATION, OPERATION & MAINTENANCE MANUAL

## 2. Installation

- When installing the ball check valves, ensure that the seat and the flange faces are clean.
- When valves are provided with lifting lugs, plates or eye nuts, these must be used to lift the valve.
- To ensure adequate sealing it is important to select the correct type of gasket for the medium concerned, gaskets with the correct flange size must be used.
- Place valve between pipe flanges, and insert the bolts.
- Tighten bolts loosely.
- Tighten bolts in a diagonal sequence to ensure flanges are pulled up parallel.
- Finally tighten bolts to correct torque levels as recommended in WSA 109.

### 2.1. Bolts

#### 2.1.1 Bolt size

The following table shows flange bolt size you should use for each size valve.

AS 4087 Table B5		
DN	Bolts	Quantity
50	M16	4
65	M16	4
80	M16	4
100	M16	4
150	M16	8
200	M16	8
225	M16	8
250	M16	8
300	M20	12

## 3. Operation

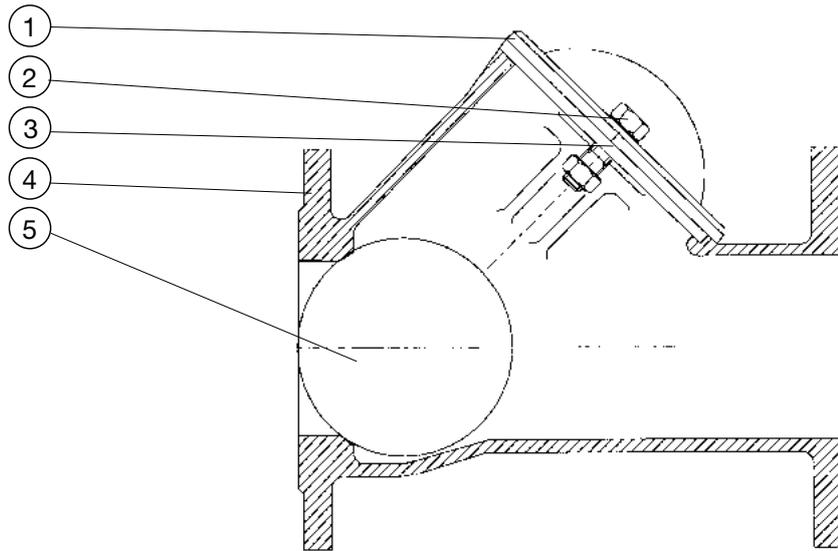
AVK ball check valves are designed and manufactured for the prevention of flow reversal and are suitable for potable water or sewage applications. The operation of the valve is fully automatic allowing liquid to flow in one direction only.

# AVK SERIES 53 BALL CHECK VALVES INSTALLATION, OPERATION & MAINTENANCE MANUAL

## 4. Maintenance

Change of bonnet O-ring and/or ball.

- Remove fasteners (2)
- Remove and replace bonnet O-ring (3). See Table1 for part number.
- Remove and replace ball (5) as required. See Table1 for part number.
- Place bonnet onto body and refit fasteners (2) and torque as per Table 2.



DN	PART NUMBER	
	O-ring	Ball
50	010623	53060150
65	010624	53095150
80	010624	53095150
100	010625	53120150
150	010626	53175150
200	010627	53240150
250	010628	53300150
300	010629	53360150

**Table 1**

Replacement bonnet O-ring  
and ball part numbers

DN	Torque	Bolts
50	40 Nm	M10
65	40 Nm	M10
80	70 Nm	M12
100	70 Nm	M12
150	110 Nm	M16
200	110 Nm	M16
250	150 Nm	M20
300	150 Nm	M20

**Table 2**

Bonnet bolt size and torque