

# **VAG Non-Return Valves**

## **The optimum Valve for each medium**



# VAG Non-Return Valves

Preventing back-flow is not only providing the optimum sealing in dependence of the medium, the pressure or the temperature.

As medium, pressure and temperature have influence on the design, the material and the stress calculations of non-return valves, back-flow prevention has to consider the dynamic behaviour of the flow and the motion of the movable components.

The dynamic behaviour of the flow is very complex, it differs from installation to installation and is not easy to record in theory. Despite these impeding facts, all non-return valves are expected to

- open under the impact of flow
- offer a small resistance to the flow
- follow the flow variations with minimum inertia
- provide reliable sealing before reversion of flow direction

- suitable
- restricted suitable
- not suitable

	water	oil-containing aggressive	sewage	hot water <120 °C	damping of water hammers
<b>SKR</b>	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
<b>SKR with damper</b>	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
<b>RETO-STOP</b>	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
<b>RSK metallic sealing</b>	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
<b>RSK soft sealing</b>	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
<b>TOP-STOP®</b>	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■
<b>KRV</b>	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■	■ ■ ■

The broad VAG product range of non-return valves offers an optimum solution for each kind of application.

## VAG SKR Slanted Seat Tilting Disk Check Valve

### Product features

- Metallic sealing, corrosion and wear resistant sealing surfaces
- Face-to-face length acc. to EN 558-1, basic series 14 (DIN 3202, F4)
- Available range of DN sizes PN 10/16 - DN 200...1000

### Materials and corrosion protection

- Body and disk of ductile iron EN-JS 1030 (GGG-40)
- Sealing surfaces nickel welded, micro-finished
- Inside and outside epoxy coating

### Field of application

- Water supply, pumping stations, power stations and industry

### Advantages

- Low space requirements due to short face-to-face length
- Due to the slanted position of the seat the stroke is reduced by 25% and the closing time is shortened
- No shaft transmitted to the outside as due to the slanted seat **no** lever and weight is required for closing
- Free-swinging, easily opening disk, which reduces the pressure loss in the plant and saves pump performance (saving of energy)
- Interior end-position damping possible
- Also suitable for **screened** sewage water



# VAG RETO-STOP Non-Return Valve



## Product features

- Fully EDPD-coated disk with integrated EPDM disk suspension
- Free flow passage
- Elastomers of EPDM approved acc. to W 270
- Face-to-face length acc. to EN 558-1, basic series 48 (DIN 3202, F6)
- Available range of DN sizes PN 10/16 - DN 40...300

## Materials and corrosion protection

- Body and disk of ductile iron EN-JS 1030 (GGG-40)
- Flap all around EPDM vulcanised
- Inside and outside epoxy coating

## Field of application

- Drinking water and waste water plants

## Advantages

- Simple design without bearing, thus no bearing-friction impairing on the motion
- Usable for fouling media like waste water
- Full open position even at low flowing rates, therefore nearly no pressure loss
- Disk is usable from both directions by turning it
- Maintenance friendly, fast and easy disassembly of cover and disk

# VAG RSK Disk Check Valve Typ AL / Typ IL

## Product features

- Metallic or soft sealing
- Face-to-face length acc. to EN 558-1, basic series 48 (DIN 3202, F6)
- Type AL soft sealing (rubber/stainless steel) with lever and weight
- Type AL metallic sealing (stainless steel/stainless steel) with lever and weight
- Type IL metallic sealing (stainless steel/stainless steel) with inside shaft
- Available range of DN sizes PN 10/16 - DN 40...250

## Materials and corrosion protection

- Body and disk of cast iron EN-JL 1040 (GG-25)
- Soft sealing design: Inside and outside epoxy coating
- Metallic sealing design: Inside and outside synthetic resin varnish coating

## Field of application

- Water supply, power stations and industry

## Advantages

- Low flow resistance in open position
- Clear flow-through cross section
- Maintenance friendly



# VAG TOP-STOP®

## Diaphragm Non-Return Valve

### Product features

- The internal circular diaphragm provides optimum damping of water hammers
- Installation in any position possible
- No mechanically moved parts
- Face-to-face length acc. to EN 558-1, basic series 48 (DIN 3202, F6)
- Available range of DN sizes
  - PN 10/16 - DN 40...300
  - PN 10 - DN 350 and DN 400

### Materials and corrosion protection

- Body of ductile iron EN-JS 1030 (GGG-40)
- Flow guide of ductile iron EN-JS 1030 (GGG-40)
- Inside and outside epoxy coating

### Field of application

- Water supply, power stations and industry

### Advantages

- Silent operation
- Prevents against slamming and shock
- No mechanically moved parts
- Quick reaction due to nearly inertialess diaphragm
- Safe operation in all positions



# VAG KRV Ball Check Valve



### Product features

- Prevention of back-flow due to ball check
- Free passage, therefore low obstruction risk
- Face-to-face length acc. to EN 558-1, basic series 48 (DIN 3202, F6)
- Available range of DN sizes PN 10 - DN 50...200

### Materials and corrosion protection

- Body and cover of ductile iron EN-JS 1030 (GGG-40)
- Ball of aluminium, NBR coated
- Inside and outside epoxy coating

### Field of application

- Waste water lines with danger of blockage

### Advantages

- Insensitive to dirt
- No mechanically moved parts
- Maintenance friendly
- Clear flow-through cross-section
- Low flow resistance in open position



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