



## Ball Check Valve COATINGS & BALL CONSTRUCTION

HDL ball check valves come standard with NBR\* coated balls.

The balls are made of a Aluminum core, strong enough to withstand the forces on the ball and are covered with a sufficient thick layer of elastomer.

The size of the core is always bigger then the size of the valve in- and outlet, so when the elastomer gets damaged or soft and soaked, the ball can **never** shoot into the pipeline to form an obstruction somewhere in the pipesystem.

For some special purposes, NBR might not be the best solution. The fluid flowing through the valve can be too abrasive, it can contain acids of various kinds, aggrasive solvents or other chemicals, that will attack the NBR compound.

Some fluids have a (much) higher density then water, and the standard sinking ball just might not sink anymore.

In all of these cases, Hillen de Lelie can replace the standard ball for a ball with another type of elastomer or/and with another weight of the ball, just to suit the specific application.

We can vary the density of the ball roughly between 800 kg/m<sup>3</sup> and 7000 kg/m<sup>3</sup>.

When the NBR elastomer is not good enough, we can also deliver the balls with:

- EPDM
- GR (Neoprene)
- FPM (Viton)
- IIR (Butyl)
- CSM (Hypalon)
- PU (Polyurethane)
- solid and hollow PTFE (Teflon)
- solid Stainless Steel
- solid PP (Polypropylene) (only floating balls)

We keep a number of these special coated balls on stock, but not all of them in all sizes, so if you need a special ball, just contact us for delivery time and price.

\* NBR, or nitril rubber, also called nitrile-butadiene rubber, is an oil-resistant synthetic rubber produced from a copolymer of acrylonitrile and butadiene. Its main applications are in fuel hoses, gaskets, rollers, and other products in which oil resistance is required.



## HDL Coatings

Hillen de Lelie ball check valves are standard only outside coated with a approximately 60µm Alkyd resin primer. This simple primer is meant to keep the valve in good shape during transport and storage, but should be painted over along with the rest of the piping as soon as the valve is installed. The inside of the valve is not coated, because for sewage water, the oxide layer on the Cast Iron surface prevents further rusting of the Iron.

Beside this standard coating, Hillen de Lelie can provide her valves with a number of different other coatings, dependent on the circumstances or on the wishes of the customer.

- Powder Epoxy coating, 80µm, normally black, but also in many other colors available. This is a good alternative when the valves are not meant to be painted after installation and need to look good for a long time. It has a reasonable chemical resistance to protect the Cast Iron for instance against some mild acids and salt water. When exposed to fluorescent or sun light for a long time, the surface will show traces of chalk coming out of the coating.
- Powder Polyester coating, 250µm, normally blue Ral5015, but in almost every color available. The chemical resistance is a little less then the epoxy coating, but it shows hardly any chalking under light exposure.
- 2 Components epoxy wet paint, in Holland mostly from Sigma. DTM coating or any other coating system applied to customer's specifications.
- Rilsan coating, 300µm, a technical thermoplastic, applied in a fluidized bed. It has a good chemical resistance. The thick plastic coating has a very smooth surface to prevent the adhesive of dirt and preserve a low friction loss. Maximum working temperature is 90°C
- Levasint coating, 300µm. Only available as long as there is powder left. The coating is much like Rilsan, but has a better chemical resistance. The powder is out of production, but still on stock at our applicator. Maximum working temperature is 70°C.
- Halar E-CTFE, 350µm. It has excellent chemical resistance to most chemicals and can be used till a working temperature of 150°C! The thick and elastic coating forms a real alternative for Stainless Steel valves.
- Ceramic coating, 500µm or 750µm. This coating offers an outstanding protection against impingement and erosion/corrosion conditions. These superb characteristics make valves with this coating suitable for mining and dredging applications and all other places, where abrasion is a serious threat.

When you need a coating, that is not in this list, just contact us. In most cases, we can apply the coating you need.

As you can see, at Hillen de Lelie is much more possible, than just a standard coating.