

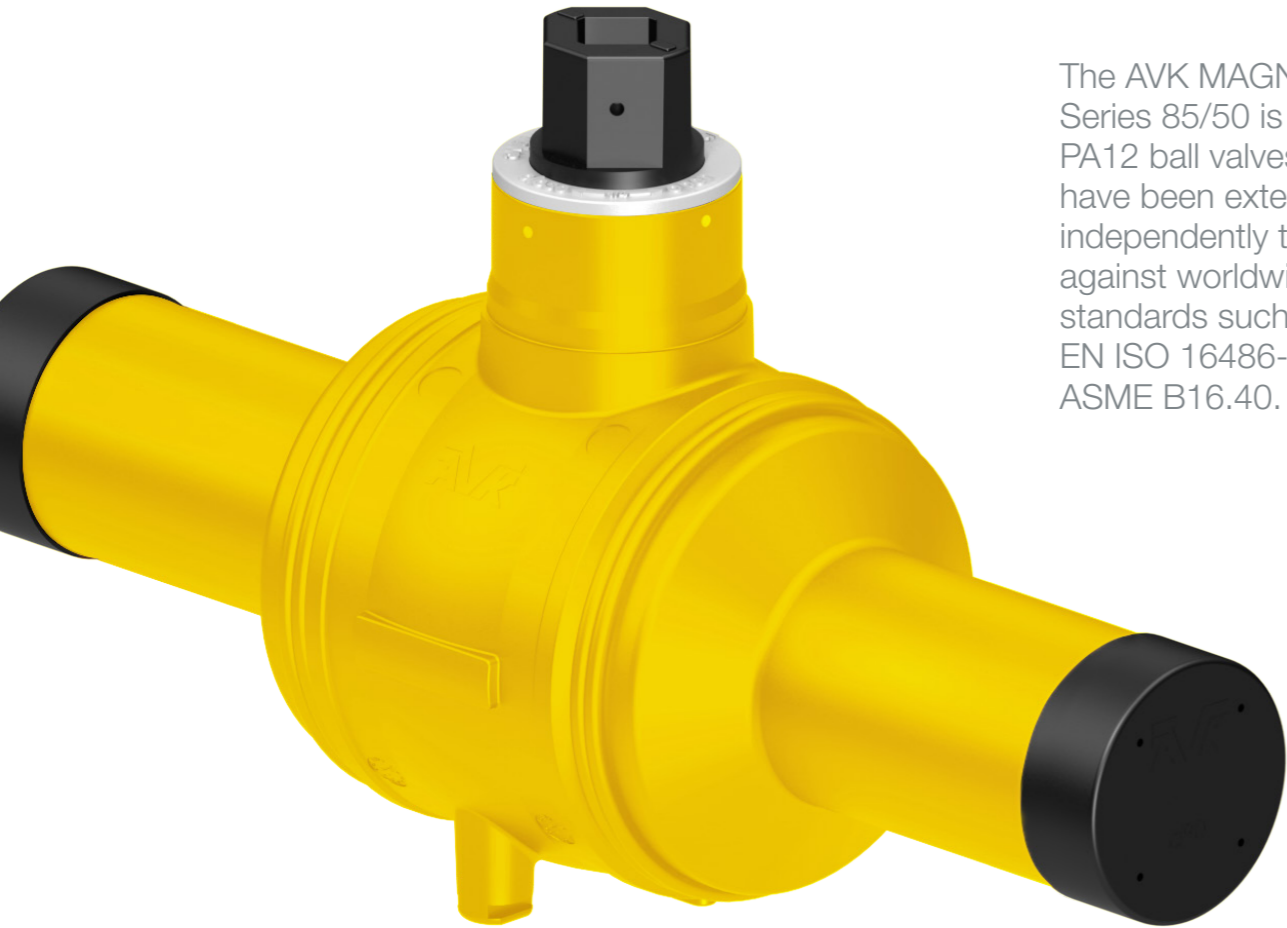
**AVK** MAGNUS PA12 BALL VALVES



**EXPECT  
SUPREME  
PA12 BALL VALVES**

Expect... **AVK**

# AVK MAGNUS PA12 VALVES



The AVK MAGNUS PA12 Series 85/50 is a range of PA12 ball valves, which have been extensively and independently type tested against worldwide leading standards such as EN ISO 16486-4 and ASME B16.40.

The AVK MAGNUS PA12 ball valves have undergone additional testing over and above that required in the specification. This ensures that the valve is suitable for distribution systems and environments anywhere in the world.

The AVK MAGNUS PA12 ball valve range consists size 110-160 mm in metric and 4-6 INCH in imperial. Depending on the requested pressure rating the valves are available with SDR11 or SDR17.6 spigot ends.

The selected materials are tested and approved for GAS applications. The valves are rated as MOP 18 bar\* / 260 PSI.

\*limited to MOP 16 bar in some CEN member countries

#### Valve access system

The valve access system consists of a collar pipe adaptor, down pipe, support tile and surface box. The collar pipe adaptor creates stability for the valve and avoids twisting of the pipe, but it also absorbs high loads and centres the down pipe installed on top of the valve ensuring valve operation at all times. The support tile and surface box complete the valve access system. Besides giving access to the lower buried valve the surface box can bear media identification for easy recognition and, if required, customer specific logos.



Valve access system

# PA12 FOR HIGH DEMANDING GAS APPLICATIONS



#### Superior performance characteristics that make PA12 an ideal choice for gas distribution infrastructures

- Designed for high pressure applications, between 10bar (145PSI) and 18bar (260PSI).
- Tough and durable
- Long term strength
- High impact resistance
- Superior Slow Crack Growth and Rapid Crack Propagation resistance
- Valves can be joined by butt fusion and electro-fusion creating a fully welded system, and at the same time reducing installation time and costs.
- High chemical and weathering resistance
- Corrosion and maintenance free
- Suitable for a.o. horizontal directional drilling, plowing, soil displacement or 2-stroke installation methods.



# FEATURES & BENEFITS

All spigot ends can be delivered with the **double spigot length** option allowing for a second electro fusion weld if the first one fails.

The spigots are butt welded to the body. **Visual beads** reassuring joint quality for each weld in complete pipe line.

The valves are equipped with two **weather seals** avoiding ingress of ground water and dirt into the operating mechanism.

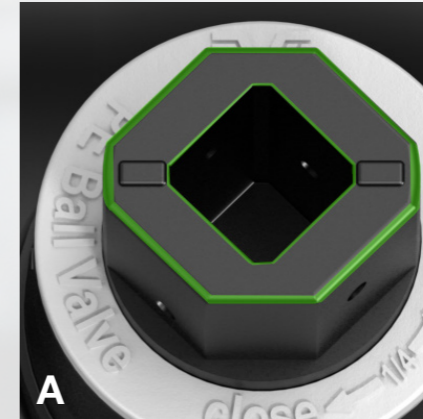
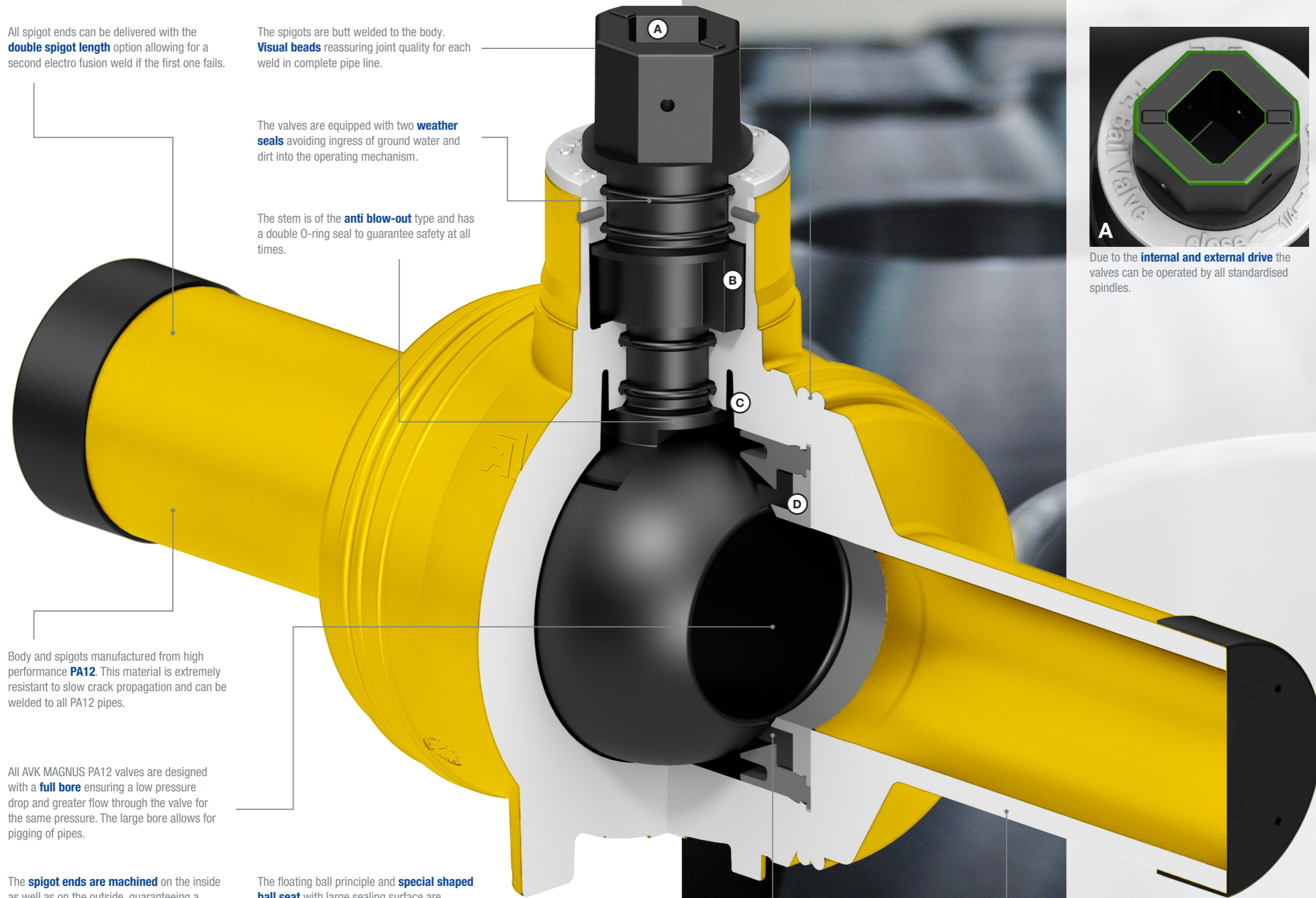
The stem is of the **anti blow-out** type and has a double O-ring seal to guarantee safety at all times.

Body and spigots manufactured from high performance **PA12**. This material is extremely resistant to slow crack propagation and can be welded to all PA12 pipes.

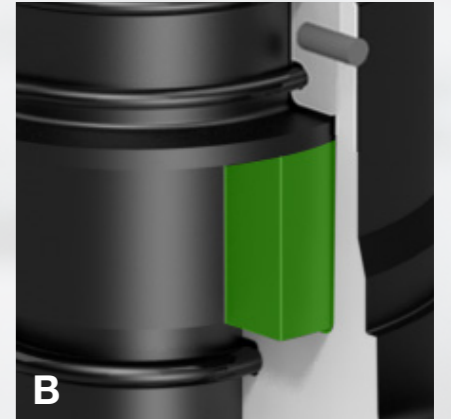
All AVK MAGNUS PA12 valves are designed with a **full bore** ensuring a low pressure drop and greater flow through the valve for the same pressure. The large bore allows for pigging of pipes.

The **spigot ends are machined** on the inside as well as on the outside, guaranteeing a uniform wall thickness, allowing for optimal welding of electro fusion couplers and the smooth inner surface prevents deposits and will minimise flow resistance.

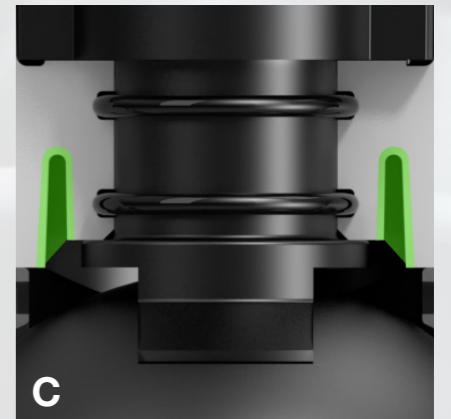
The floating ball principle and **special shaped ball seat** with large sealing surface are designed to ensure sealing at all times and be less affected by dirt or debris that might be in the pipeline.



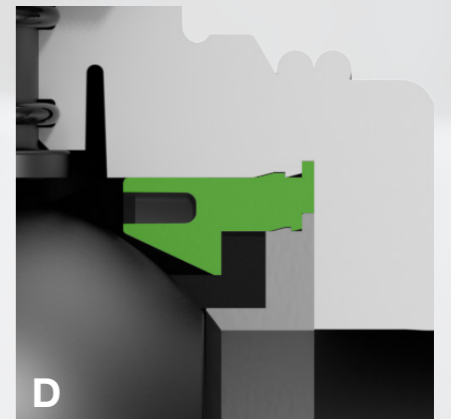
Due to the **internal and external drive** the valves can be operated by all standardised spindles.



If the valve is over torqued during opening or closing, the connector is designed to fail before the valve seals, thus preventing a leak to atmosphere. The **safety connector** can be replaced under live conditions.



The **flexible spindle shaft** ensures equal compression around the O-rings when loaded by internal pressure. At the same time the groove will adapt to any deformation as a result of upstream pressure on the ball when the valve is in the closed position.



The **seat retainer and support ring** design ensure the ball seat is kept in place at all times. This optimal design prevents the ball seat from being dislodged, which guarantees a good functionality throughout the years.



# QUALITY IN EVERY STEP

## Construction & material selection

The AVK MAGNUS PA12 ball valves are made out of PA12 offering excellent resistance to slow crack propagation and can be welded to PA12 pipes.

The main internal construction of the AVK MAGNUS PA12 is based on a large ball seat arrangement for reliable sealing performance. By means of a seat retainer and dedicated support ring, the ball seat is firmly kept in place. The seat compression is accurately set by fixating the ball seat arrangement into the body, prior to welding. The spigots are butt welded to the body. Butt welding is chosen because of the long term practically proven reliability. For the welding, the leading DVS2207-16 guidelines are strictly followed. The skimming and welding steps are performed by fully automated welding stations, guaranteeing ultimate consistency of the ball valves.

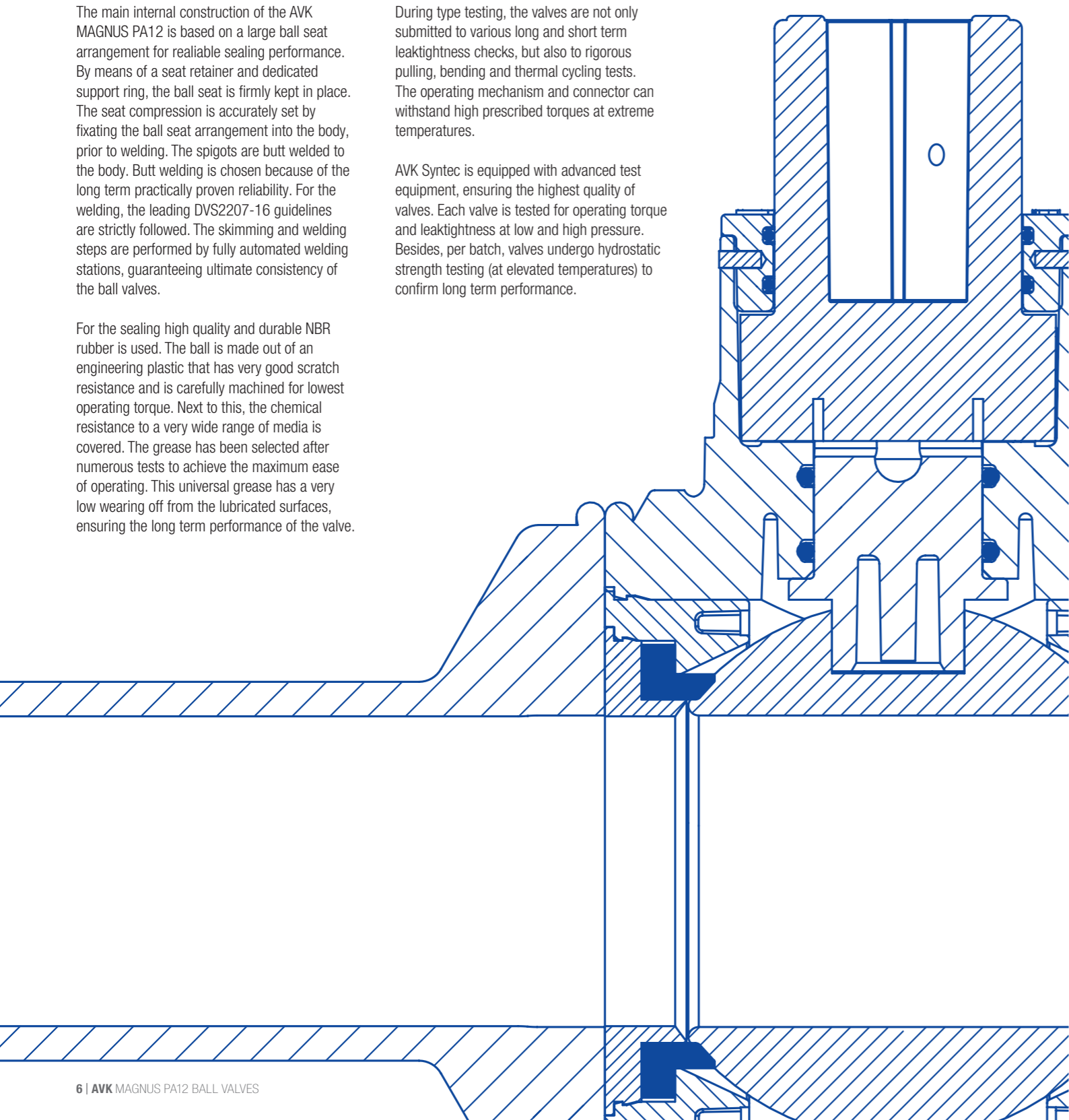
For the sealing high quality and durable NBR rubber is used. The ball is made out of an engineering plastic that has very good scratch resistance and is carefully machined for lowest operating torque. Next to this, the chemical resistance to a very wide range of media is covered. The grease has been selected after numerous tests to achieve the maximum ease of operating. This universal grease has a very low wearing off from the lubricated surfaces, ensuring the long term performance of the valve.

## Approvals & testing

AVK MAGNUS PA12 valves are fully type tested at an external worldwide reputable laboratory. The valves meet all the requirements of the EN ISO 16486-4 and ASME B16.40.

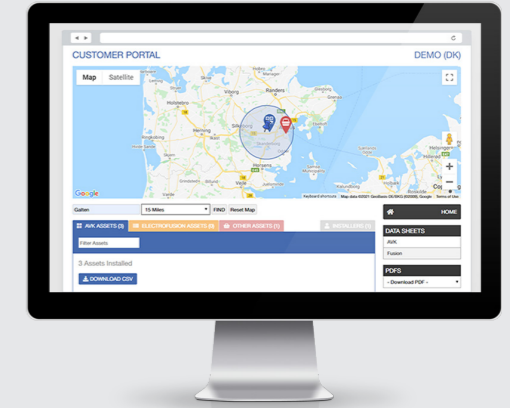
During type testing, the valves are not only submitted to various long and short term leaktightness checks, but also to rigorous pulling, bending and thermal cycling tests. The operating mechanism and connector can withstand high prescribed torques at extreme temperatures.

AVK Syntec is equipped with advanced test equipment, ensuring the highest quality of valves. Each valve is tested for operating torque and leaktightness at low and high pressure. Besides, per batch, valves undergo hydrostatic strength testing (at elevated temperatures) to confirm long term performance.



# AVK ASSIST INSTALL & TRACE

AVK Assist mobile app is a complete installation tracker and asset management system using a QR code platform to enable full traceability of your assets. Together with AVK Assist customer portal it allows complete control of all aspects of the asset management system.



## Get full traceability of your assets

Each installed valve has a unique GPS pin location, and when combined with a photo of the installation, it provides a complete, accurate and auditable record of every valve you have installed.



SCAN  
QR CODE

## On the customer portal you can

- search on locations to see if any assets are recorded
- get a quick overview of whether assets are from AVK, FUSION or other suppliers
- see valve location on a map and a list of installation details
- view the quality of assets, via photographs
- export data collected using a common file format to integrate into existing mapping (GIS) systems
- create their own users
- add installers
- get access to further information

## Confidential installation data of ALL assets

The use of AVK Insight is not limited to AVK valves and can be used to track and manage all assets.

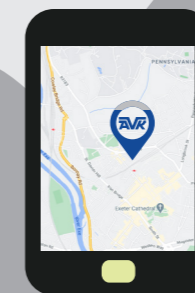
Installation data is confidential to the customer and can be exported in formats that allow integration with existing mapping systems.

## Get free account

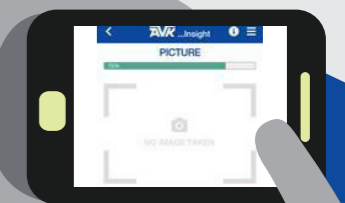
To access AVK Insight and the dedicated web portal, an account needs to be created by our technical team

Please contact your local AVK supplier to set up your free AVK Insight account.

SET  
LOCATION



TAKE  
PICTURE



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Expect... 