



EXPECT  
EASY  
INSTALLATION

Expect... **AVK**



# COMPLETE RANGE OF HIGH QUALITY COUPLINGS AND FLANGE ADAPTORS

AVK offers a wide range of universal and dedicated couplings, flange adaptors and end caps designed for easy installation. The excellent corrosion protection and rubber quality ensure durable solutions.

## Excellent corrosion protection

AVK products meet the GSK requirements and conform to other international standards of effective corrosion protection. By virtue of our membership of GSK (Gütegemeinschaft Schwerer Korrosionsschutz), our entire coating process complies with RAL-GZ 662 guidelines and is being monitored and approved twice a year by the independent testing institute MPA-Hannover.

Automatic monitoring of time, temperature, coating thickness etc. ensures maximum durability of the coating.

## State-of-the-art rubber technology

The rubber for the gaskets is developed and produced by AVK GUMMI A/S with the use of highly advanced technologies.

The EPDM rubber composition is designed to minimise the building of biofilm in order to prevent the rubber from forming breeding ground for bacteria. The compound is also resistant to ozone and water treatment chemicals such as sodiumhypochlorite solutions.

Furthermore, AVK's EPDM rubber has a unique compression set, meaning the ability to regain original shape. Even after many years of service where the rubber has been compressed numerous times, it will regain its original shape and ensure a tight sealing.





# SUPA MAXI™ TENSILE UNIVERSAL COUPLINGS



Supa Maxi™ comprises a complete range of large tolerance universal and tensile straight couplings, step couplings, flange adaptors, end caps and transition couplings according to EN 14525 for water, wastewater and gas applications. Furthermore, a range of gate valves for water and wastewater applications.

#### Supa Maxi™ sets a new standard with its unique features:

- Fully universal and tensile on all pipe materials
- Patented SupaGrip™ sealing support system with flexible bracket
- PN16 in all dimensions for water (WP -0,9 to 16 bar), PN10 for gas
- $\pm 4^\circ$  ( $8^\circ$  in total) angular deflection on each side, even at minimum pipe size
- Permanent protection caps protect during handling and installation
- Bolts are tightened on the bolt head from the sleeve side
- No re-tightening of bolts needed
- Lifting eye on sizes with a weight exceeding 10 kilos (DN100-600)
- Fusion bonded epoxy coating in compliance with DIN 3476 part 1 and EN 14901, GSK approved
- Gasket of EPDM rubber approved for drinking water/NBR approved for gas
- Temperature range -20°C to +70°C
- The gate valve provides extra safety when repairing old pipes. With a built-in gate valve it is easy to shut-off the water in case of further repair or replacement of the pipeline at a later stage.



Gate valve

Straight coupling

Flange adaptor

Step coupling

End cap

Transition coupling

Before tightening



After tightening



The patented SupaGrip™ sealing support system features a flexible bracket, and combined with the unique grip design, SupaGrip™ provides superior tightness and tensile resistance on all pipe dimensions and materials.

#### Flexible bracket with rigid metal backup

SupaGrip™ provides full support and backup of the gasket, even on minimum pipe size within the tolerance range and when used on oval pipes.

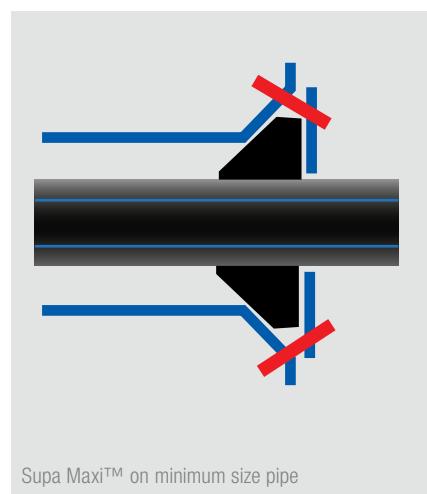
The flexible bracket is designed to contract and follow the external pipe diameter. As a result, it serves as a solid backup for the gasket and enables full deflection up to  $1.5 \times \text{PN}$  test pressure.

When tightening the bolts, the bracket segments and bolts move inwards, securing that the gasket tightens around the pipe and that the grip segments grip into the pipe surface.

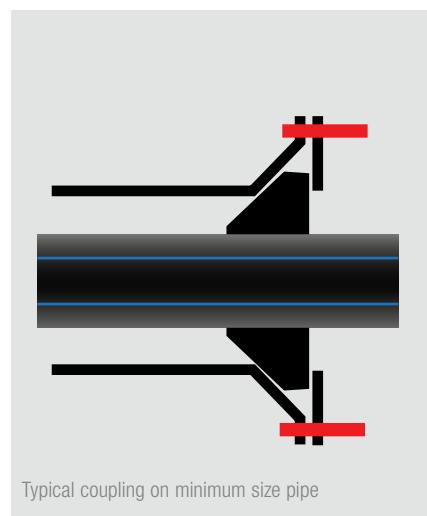
#### Tensile on all pipe materials

Optimum grip and tensile abilities on all pipe materials are secured by means of two different metal grip segments - gunmetal for PE and PVC pipes and hardened stainless steel for cast iron, ductile iron, steel, stainless steel, GRP, and AC pipes. The couplings are designed and approved according to EN 14525.

The grip segments are mounted with pins on the bracket segments to provide maximum durability. The high quality materials safeguard that the sealing does not lose compression over time, and that the coupling stays tensile.



Supa Maxi™ on minimum size pipe



Typical coupling on minimum size pipe

# OPTIMISE HANDLING AND INSTALLATION

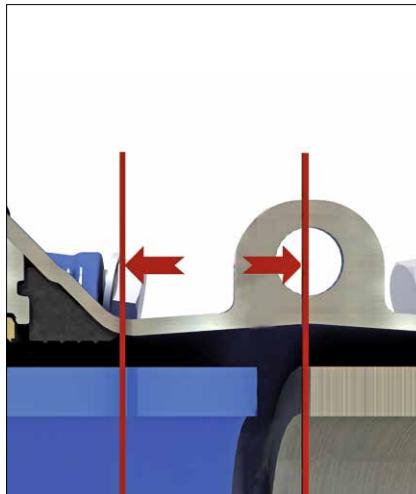
AVK Supa Maxi™ couplings and adaptors offer maximum flexibility, facilitating a secure, fast and easy installation even under difficult conditions.

## Reduce time spent on installation

The couplings enable  $\pm 4^\circ$  deflection on each side (in total  $8^\circ$ ) up to a maximum pressure of PN16.

The large insertion depth tolerances allow the pipe to be cut slightly angled. This gives a simple installation without need for precise adjustment.

All items with a weight exceeding 10 kilos are designed with a lifting eye on the sleeve enabling easy and ergonomically safe handling.





### Optimised bolt design

The bolt design is optimised for fast and simple assembly. The bolts are tightened from the sleeve side to ease assembly when space in the trench is limited, and the threads are protected by the permanent protection cap.

The nuts are encaptured in the bracket and covered by a protection cap to ensure that they will not fall off when loosening the bolts. Re-tightening of bolts is not necessary due to the all metal SupaGrip™ sealing support system. The bolts and nuts are anti-friction coated to prevent galling.

### Permanent protection cap

During handling the centre piece of the protection cap covers the sharp grip segments and prevents dirt from settling inside the coupling. When the centre piece is removed the coupling is ready for installation.

### High quality materials

The couplings are designed with sleeves of ductile iron and brackets of cast steel with epoxy coating in compliance with DIN 3476 part 1 and EN 14901, GSK approved.

The gaskets of EPDM rubber are approved by NF and DVGW for drinking water applications and the gaskets of NBR rubber are approved by DVGW and Gastec.

The bolts and washers are of stainless steel A2 as standard and optionally of A4. The nuts are of acid-resistant stainless steel A4.

The grip segments are of RG5 bronze and hardened stainless steel, mounted with pins of polyamide.

The permanent protection caps of recyclable PE are black for water and wastewater applications and yellow for gas applications.



# SUPA PLUS™ TENSILE COUPLINGS DEDICATED FOR PE AND uPVC PIPES



AVK Supa Plus™ is a range of high quality tensile gate valves, couplings, flange adaptors and end caps in DN40-300 dedicated for PE and uPVC pipes. The Supa Plus™ range is a strong supplement to AVK's renowned Supa® and Supa Maxi™ range and is suitable for water and wastewater applications.

Supa Plus™ couplings offer a great flexibility and are very easy to mount due to the combined compression gasket which enables a large angular deflection and makes it easy to insert the pipes.

- The combined gasket of drinking water approved EPDM rubber with tensile grip segments of RG5 bronze enables  $\pm 3.5^\circ$  angular deflection on each side (total  $7^\circ$ )
- The design with external bolts prevents corrosion between sleeve and bolts.
- The M16 bolts of stainless steel A2 and the nuts of acid-resistant stainless steel A4 are anti-friction coated to offer easy tightening and to prevent galling.

- The compression type gasket makes it easy to insert the pipe, even in large dimensions.
- Sleeve and bracket of ductile iron with epoxy coating in compliance with DIN 3476 part 1, EN 14901, and AVK guidelines.
- The couplings are delivered with tape securing the bolts during transport and handling. A mounting instruction is printed on the tape.



Gate valve



Straight coupling



Flange adaptor



End cap

# SUPA® UNIVERSAL NON-TENSILE COUPLINGS



The AVK Supa® universal straight couplings, step couplings and flange adaptors are suitable for uPVC, cast iron, ductile iron, steel and AC pipes. The couplings range from DN40 to 400 and are suitable for water and wastewater applications.

With its wide tolerance span and  $\pm 4^\circ$  angular deflection on each side the AVK Supa® range is a very flexible coupling system used for the assembly of pipes of almost any kind of pipe material and for repair of old piping systems.

- $\pm 4^\circ$  angular deflection on each side (total  $8^\circ$ ).
- Drinking water approved EPDM gasket with moulded ribs absorbs minor imperfections in the pipe.
- The design with loose bolts prevents corrosion between sleeve and bolts.
- The bolts and the nuts are anti-friction coated to offer easy tightening and to prevent galling.
- Ductile iron with epoxy coating in compliance with DIN 3476 part 1, EN 14901, and AVK guidelines.



Straight coupling



Step coupling



Flange adaptor

# COMBI-FLANGES TENSILE AND NON-TENSILE DEDICATED ADAPTORS



AVK's combi-flange system comprises tensile combi-flanges for PE, PVC and ductile iron pipes in DN50-300 as well as non-tensile combi-flanges for PVC, ductile iron and steel pipes in DN50-600. The combi-flanges are suitable for water and wastewater applications.

## Large pipe deflection possible

Combi-flanges are typically used for connecting two pipes with a flanged valve in between, and often the pipes are positioned out of level.

The barrel shaped rubber sealing allows for a significant pipe deflection of up to  $\pm 3.5^\circ$  even in the tensile executions. Consequently, combi-flanges provide great flexibility without compromising with tightness.

## Flexible positioning of the pipe

It is possible to retract the pipe end up to 50 mm from the combi-flange gasket face, as long as it is positioned within the buffer zone. The large buffer zone makes it easy to install the

combi-flange, as there is no need for accurate adjustments.

It also allows easy pipe chamfering, which means that a pipe cut unevenly or out of angle does not cause any problems, as long as it stays within the buffer zone. The buffer zone is clearly marked on the sealings.

## No horizontal pipe movement

The combi-flange sealing features a narrow compression zone which secures fast compression when tightening the bolts. The rubber sealing will always tighten around the pipe before the tensile ring grips into the pipe surface, which prevents longitudinal movement.

## A lot of great features

- Up to  $\pm 3.5^\circ$  deflection of the pipe is possible even in tensile executions.
- The design features a flexible positioning and chamfering of the pipe.
- The pipe will not move inwards during installation which helps securing a tight connection.
- The EPDM rubber sealings are approved for drinking water applications and are resistant to water treatment chemicals.
- The flanges are coated with epoxy coating in compliance with DIN 3476 part 1, EN 14901, and AVK guidelines.



# FABRICATED NON-TENSILE DEDICATED COUPLINGS AND FLANGE ADAPTORS



AVK's range of fabricated fittings comprises non-tensile straight couplings, step couplings and flange adaptors in DN350-2000. The range is suitable for ductile and grey cast iron, steel, uPVC and GRP pipes for water and wastewater applications up to 25 bar.

AVK fabricated couplings and adaptors are designed to facilitate the joining of pipe of matching or differing outside diameter (OD) or for fitting flanged equipment into pipeline systems.

The AVK fabricated fittings range is highly versatile where any pipe OD or flange variant can be accommodated within the range.

The sealing arrangement allows a tolerance of 7 mm ensuring that minor deviations in OD can be accommodated. Angular deflection per seal end is +4 mm < DN600, +3 mm < DN800, +2 mm < DN2000.

Increased coating thickness and a range of fastener options including A2 and A4 stainless steel are available for more aggressive installation environments. All materials are certified as suitable for use with potable water.



Straight coupling

Step coupling

Flange adaptor



# REPICO® TENSILE AND NON-TENSILE UNIVERSAL COUPLINGS



AVK's range of Repico® couplings in stainless steel 316 comprises tensile "Grip" couplings for all metal pipe materials up to DN400, and non-tensile "Slip" couplings for all pipe materials up to DN2000. Repico® couplings are suitable for water and wastewater applications.

## **Ease of use**

Repico® couplings offer a fast and simple installation thanks to the design with very few bolts. Only a torque wrench is needed, and the bolt tightening can be done in few minutes.

The couplings offer 2°-5° angular deflection depending on pipe size: DN15-50 allow 5°, DN65-175 allow 4° and couplings from DN200 allow 2° angular deflection.

The bolts are anti-friction coated to offer easy tightening and to prevent galling. Furthermore, the light-weight and compact design makes handling easy and requires only very limited space for installation.

## **Progressive sealing and anchoring**

Repico® couplings offer progressive sealing, which means that when the internal pressure increases, it also increases the pressure on the sealing lips, and they are thus pressed against the pipe.

The tensile Grip couplings also offer progressive anchoring, which means that when the internal pressure increases, the support ring is pushed outwards forcing the grip ring to grip deeper into the pipe surface.



Slip type, standard



Slip type, two locks

# DISMANTLING JOINTS UNIVERSAL FOR ALL PIPE MATERIALS



AVK dismantling joints provide easy installation and disassembly of flanged pipework and equipment and compensate for axial displacement of the pipe during installation and dismantling. The range is available in DN40-2600 in PN10/16 and up to DN1200 in PN25.

The dismantling joint compensates for axial displacement of the pipe during installation and dismantling, as the telescopic action between the inner and outer flange body allows for longitudinal adjustment.

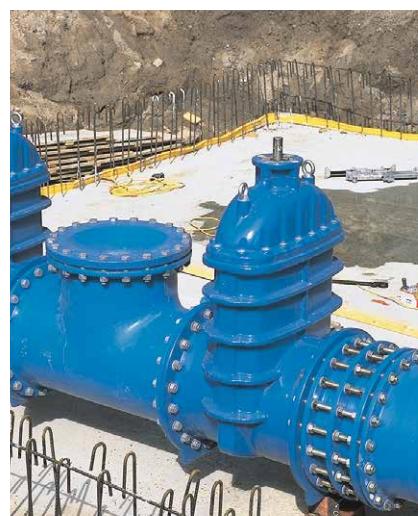
AVK dismantling joints are available in ductile iron with fusion bonded epoxy coating in DN40-1600, and up to DN2600 with 2-pack epoxy coating.

Additionally, variants in mild steel are available in two designs; with a minimised number of tie-rods for a cost-effective installation/dismantling, and a design similar to the ductile iron variant.

The axial adjustment of 40-80 mm offers a high level of flexibility in the installation and removal of flanged equipment for either maintenance or replacement.



Design with minimised number of tie-rods  
Steel



# SUPA MAXITM, SUPA PLUSTM AND SUPA® COUPLINGS, ADAPTORS, END CAPS AND VALVES



## Series 636

Supa Maxi™ gate valve  
Universal and tensile for  
all pipes  
Ductile iron  
DN80-300  
PN16



## Series 631

Supa Maxi™ straight  
coupling  
Universal and tensile  
for all pipes  
Ductile iron  
DN50-600  
PN16



## Series 632

Supa Maxi™ step  
coupling  
Universal and tensile  
for all pipes  
Ductile iron  
DN50-300  
PN16



## Series 633

Supa Maxi™ flange  
adaptor  
Universal and tensile  
for all pipes  
Universal drilling  
Ductile iron  
DN40-600  
PN10/16



## Series 634

Supa Maxi™ end cap  
Universal and tensile  
for all pipes  
Ductile iron  
DN50-400  
PN16



## Series 635

Supa Maxi™ transition  
coupling with PN10 or  
PN16 pipe end  
Universal and tensile  
for all pipes  
Ductile iron  
DN50-300  
PN10/16



## Series 01/70

Supa Plus™ gate valve  
Tensile for PE and uPVC  
pipes  
Ductile iron  
DN40-300  
PN16



## Series 621/10

Supa Plus™ straight  
coupling  
Tensile for PE and uPVC  
pipes  
Ductile iron  
DN32-300  
PN16



## Series 623/10

Supa Plus™ flange  
adaptor  
Tensile for PE and uPVC  
pipes  
Universal drilling  
Ductile iron  
DN40-300  
PN10/16



## Series 624/10

Supa Plus™ end cap  
Tensile for PE and uPVC  
pipes  
Ductile iron  
DN40-300  
PN16



## Series 601

Supa® straight coupling  
universal for uPVC, AC,  
steel, cast iron and ductile  
iron pipes  
Ductile iron  
DN40-400  
PN16



## Series 603

Supa® flange adaptor  
universal for uPVC, AC,  
steel, cast iron and ductile  
iron pipes  
Universal drilling  
Ductile iron  
DN40-400  
PN10/16

# COMBI-FLANGES, FABRICATED COUPLINGS & ADAPTORS AND DISMANTLING JOINTS



## Series 05

Combi-flange for ductile iron pipes  
Tensile  
Ductile iron/EPDM  
DN50-300  
PN10/16

Options:  
• Non-tensile



## Series 05

Combi-flange for PE and PVC pipes  
Tensile  
Ductile iron/EPDM  
DN 50-300  
PN 10/16

Options:  
• Non-tensile for PVC



## Series 05

Combi-flange for uPVC, steel or ductile iron pipes  
Non-tensile  
Ductile iron  
DN400-600 (uPVC and ductile)  
DN50-300 (steel)  
PN10/16



## Series 05

Combi-flange sealing for uPVC, steel or ductile iron pipes  
Non-tensile  
SBR rubber  
DN400-600 (uPVC and ductile)  
DN50-300 (steel)



## Series 05

Support bush for PE pipes  
Suitable for Supa Maxi™, Supa Plus™ and combi-flanges  
Stainless steel  
DN50-600  
PN6.3/10/16



## Series 745/01

Repico® grip coupling  
Universal and tensile for all metal pipes  
Stainless steel AISI 316  
NBR or EPDM sealing  
DN15-400

Options:  
• for medium pressure up to DN200



## Series 745/20

Repico® slip coupling  
Universal and non-tensile for all pipes  
Stainless steel AISI 316  
NBR or EPDM sealing  
DN15-600

Options:  
• 2 locks up to DN1000



## Series 258

Fabricated straight coupling for AC, steel, cast iron or ductile iron pipes  
Steel  
DN350-2000  
PN8 to 25



## Series 259

Fabricated step coupling for AC, steel, cast iron or ductile iron pipes  
Steel  
DN350-2000  
PN8 to 25



## Series 260

Fabricated flange adaptor for AC, steel, cast iron and ductile iron pipes  
Steel  
DN350-2000  
PN10/16/25



## Series 265/30

Fabricated dismantling joint for all pipe materials  
Steel  
DN300-1200  
PN10/16/25



## Series 873

Dismantling joint for all pipe materials  
With centre flange  
Ductile iron  
DN40-2600  
PN10/16/25

Options:  
• Fabricated in steel



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