



# AVK Australia Holding Pty Ltd

## PRODUCT APPRAISAL REPORT PA 1810 Issue 2

AVK Supa-Gib Couplings

**AS/NZS 4998:2009 Bolted unrestrained couplings for  
waterworks purposes**

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## Document History

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## Peer Reviewers

Name/Title	Organisation	Date
Product Appraisal Technical Advisory Group	WSAA	6 March 2018
WSAA Expert Panel	WSAA	6 March 2018
Peter Pittard, WSAA Consultant	WSAA	19 February 2018
Carl Radford, Product Appraisal Manager	WSAA	9 March 2018
Peter Pittard, WSAA Consultant	WSAA	26 January 2024
Carl Radford, Product Appraisal Manager	WSAA	29 January 2024

## Overview of WSAA

The Water Services Association of Australia (WSAA) is the peak industry body representing the urban water industry. Our members provide water and sewerage services to over 20 million customers in Australia and New Zealand and many of Australia's largest industrial and commercial enterprises.

Based around our vision of 'customer driven, enriching life', WSAA facilitates collaboration, knowledge sharing, networking and cooperation within the urban water industry. We are proud of the collegiate attitude of our members which has led to industry-wide approaches to national water issues.

WSAA can demonstrate success in the standardisation of industry performance monitoring and benchmarking, as well as many research outcomes of national significance. The WSAA Executive retains strong links with policy makers and legislative bodies and their influencers, to monitor emerging issues of importance to the urban water industry.

WSAA was formed in 1995 as a non-profit organisation to foster the exchange of information between industry, government and the community, and to promote sustainable water resource management.

The urban water industry is committed to anchoring its services to customers' values, and to enrich communities where water services have broad economic, environmental and social values. In line with this our main activities focus on four areas:

1. influencing national and state policies on the provision of urban water services and sustainable water resource management
2. promoting debate on environmentally sustainable development and management of water resources and the community health requirements of public water supplies
3. improving industry performance and establishing benchmarks and industry leading practices for water service processes; and
4. fostering the exchange of information on education, training, research, water and wastewater management and treatment and other matters of common interest.

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## 1 EXECUTIVE SUMMARY

AVK Australia Holding Pty Ltd is part of the AVK Group, an international manufacturer of valves and fittings for the water, gas, sewerage and fire protection industries. AVK Wang is an operating unit of AVK located in Wangaratta Victoria and manufactures a range of Wang brand and AVK brand stainless-steel repair clamps and pipeline couplings.

This appraisal covers a range of PN16 AVK Supa-Gib couplings including straight barrel couplings, stepped barrel couplings, flanged adaptors and blank end couplings in sizes from DN 80 to DN 675.

The couplings are manufactured in conformance with AS/NZS 4998:2009 *Bolted unrestrained mechanical couplings for water works purposes* and marketed by AVK Australia Pty Ltd.

This Issue 2 is a replacement for the previous version of the appraisal which had reached its 5-year expiry date.

The couplings are available with short barrel and long barrel configurations. The end rings and barrels are either thermal bonded polymeric coated ductile iron or Grade 316 stainless steel. Fasteners are either galvanised steel or Grade 316 stainless steel and the seals are manufactured from Nitrile rubber.

The couplings are designed to suit a wide range of pipe OD's and are suitable for joining spigot ends of pipe manufactured from grey or ductile cast iron, steel, PVC-U, PVC-M, PVC-O and asbestos cement. They are not suitable for joining PE pipes.

The complete range of couplings submitted for appraisal is listed in Section 4 although not all products are contained within the StandardsMark product schedule. Those products that qualify as complying with the type test requirements of AS/NZS 4998 are included in Section 4.

It is acknowledged that a larger range of couplings, including sizes smaller than DN 80 and larger than DN 675, are available and have been widely utilised by Australian Water Agencies over many years, however this Appraisal endorsement is limited to products that have been demonstrated to comply with AS/NZS 4998 type test requirements. Whilst blank end couplings are not specifically contained within AS/NZS 4998 the joints on these fittings are identical to those on the couplings and are therefore considered as acceptable.

AVK Australia Holding Pty Ltd, including the AVK Wang site, holds an ISO 9001 Quality Management System Licence.

The AVK Supa-Gib couplings have ISO Type 5 StandardsMark product certification to AS/NZS 4998:2009 *Bolted unrestrained mechanical couplings for water works purposes*.

This Appraisal has determined that the AVK Supa-Gib couplings meet the requirements of WSA PS 270 – *Mechanical Couplings, Non-End Thrust Restraint for Pressure Applications- Drinking Water, Non-Drinking Water Supply and Sewerage* and are therefore deemed to be 'fit-for-purpose'.

### 1.1 Recommendations

It is recommended that WSAA members, subject to any specific requirements of the member, accept or authorise AVK Supa-Gib Couplings in sizes DN 80 to DN 675, as detailed in this report, for use in jointing of pipes, other than PE, in water and sewerage applications in above or below ground applications, provided they are installed in accordance with WSAA Codes and the manufacturer's requirements, where specified.

## 2 THE APPLICANT

The Applicant is AVK Australia Holding Pty Ltd.

## 2.1 The Supplier

The AVK Supa-Gib bolted unrestrained couplings are marketed by AVK Australia Holding Pty Ltd.

## 2.2 The Manufacturer

AVK Australia Holding Pty Ltd is privately owned and part of the AVK Group which is comprised of more than 100 companies operating in more than 35 countries. AVK is a leading international manufacturer of valves and pipeline accessories.

AVK Australia incorporates AVK Valves, AVK Wang, AVK Currumbin, AVK Flow Control and AVK Complete Tapping Service. The company utilises its local manufacturing footprint as well as the AVK Global production supply chain to service pipeline infrastructure, water treatment, sewage processing, fire protection, irrigation, dams, reservoirs, mining operations and gas distribution.

AVK has been manufacturing in Australia for over 20 years and specialises in a range of valves, hydrant, couplings, repair clamps, tapping saddles, pipe fittings and other fittings and specialty products.

The AVK Wang manufacturing facility is located in Wangaratta, Victoria.

The stainless-steel components are fabricated at the Wangaratta facility whilst the bare ductile iron components are sourced from China. DI castings are sourced from Jingxian Hengyun Machinery Casting Co Ltd in China. Coatings are applied by AVK Adelaide. Fasteners are supplied by James Glen. Assembly is completed at the AVK Wang manufacturing facility in Wangaratta.

## 3 THE PRODUCT

This appraisal covers a range of PN16 AVK Supa-Gib couplings including straight barrel couplings, stepped barrel couplings, flanged adaptors and blank end couplings in sizes from DN 80 to DN 675.

The couplings are manufactured in conformance with AS/NZS 4998:2009 *Bolted unrestrained mechanical couplings for water works purposes*.

The couplings are available with short barrel and long barrel configurations. The end rings and barrels are either thermal bonded polymeric coated ductile iron or Grade 316 stainless steel. Fasteners are either galvanised steel or Grade 316 stainless steel and the seals are manufactured from Nitrile rubber.

The couplings are designed to suit a wide range of pipe OD's and are suitable for joining spigot ends of pipe manufactured from grey or ductile cast iron, steel, PVC-U, PVC-M, PVC-O and asbestos cement. They are not suitable for joining PE pipes.

The range of couplings is given in Tables 1 to 5 with material options denoted.

Each coupling, except DN 80, has a reach of 24mm.

It is acknowledged that a larger range of couplings are available, including sizes less than DN 80 and greater than DN 675, which have been widely utilised by Australian Water Agencies over many years, however this Appraisal endorsement is limited to products that have been demonstrated to comply to AS/NZS 4998 type test requirements.

Whilst blank end couplings are not specifically contained within AS/NZS 4998 the joints are identical to those on the straight couplings and are therefore considered as conforming for those sizes tested.

The complete range of couplings submitted for appraisal is listed in Tables 1 to 4 although not all products are contained within the StandardsMark product schedule. Those products that qualify as complying with the type test requirements of AS/NZS 4998 are included in the tables.

**TABLE 1 STRAIGHT COUPLINGS - SHORT BARREL**

DN	Reach	Barrel	End Ring	Fasteners
80	88-103	FC	FC	Gal
80	88-103	FC	FC	SS
100	109-133	SS	FC	Gal
100	109-133	SS	FC	SS
125	123-147	FC	FC	Gal
125	123-147	FC	FC	SS
150	158-182	SS	FC	Gal
150	158-182	SS	FC	SS
150	170-194	FC	FC	Gal
150	170-194	FC	FC	SS
150	178-202	FC	FC	Gal
175	178-202	FC	FC	SS
200	214-238	SS	FC	Gal
200	214-238	SS	FC	SS
225	240-264	SS	FC	Gal
225	240-264	FC	SS	SS
300	310-334	SS	FC	Gal
300	310-334	SS	FC	SS
300	330-354	SS	FC	Gal
300	330-354	SS	FC	SS

**TABLE 2 STRAIGHT COUPLINGS - LONG BARREL**

DN	Reach	Barrel	End Ring	Fasteners
80	88-103	FC	FC	Gal
80	88-103	FC	FC	SS
100	109-133	SS	FC	Gal
100	109-133	SS	FC	SS
150	158-182	SS	FC	Gal
150	158-182	SS	FC	SS
200	214-238	SS	FC	Gal
200	214-238	SS	FC	SS
225	240-264	SS	FC	Gal
225	240-264	SS	FC	SS
250	272-296	SS	FC	Gal

DN	Reach	Barrel	End Ring	Fasteners
250	272-296	SS	FC	Gal
300	310-334	SS	FC	Gal
300	310-334	SS	FC	SS
300	330-354	SS	FC	Gal
300	330-354	SS	FC	SS
300	342-366	SS	SS	SS
350	346-370	SS	SS	SS
350	360-384	SS	SS	SS
350	370-394	SS	SS	SS
375	380-404	SS	SS	SS
375	396-420	SS	SS	SS
375	402-426	SS	SS	SS
375	410-434	SS	SS	SS
375	422-446	SS	SS	SS
375	426-450	SS	SS	SS
400	436-460	SS	SS	SS
400	444-468	SS	SS	SS
400	447-471	SS	SS	SS
450	455-490	SS	SS	SS
450	488-512	SS	SS	SS
450	498-522	SS	SS	SS
500	510-534	SS	SS	SS
500	522-546	SS	SS	SS
500	530-554	SS	SS	SS
500	542-566	SS	SS	SS
500	552-576	SS	SS	SS
525	560-584	SS	SS	SS
525	565-589	SS	SS	SS
525	574-598	SS	SS	SS
525	580-604	SS	SS	SS
525	596-620	SS	SS	SS
600	602-626	SS	SS	SS
600	608-632	SS	SS	SS
600	620-664	SS	SS	SS
600	630-654	SS	SS	SS
600	640-664	SS	SS	SS
600	648-672	SS	SS	SS
600	654-678	SS	SS	SS



DN	Reach	Barrel	End Ring	Fasteners
600	658-682	SS	SS	SS
600	670-694	SS	SS	SS
600	690-714	SS	SS	SS
600	700-724	SS	SS	SS
675	714-738	SS	SS	SS

**TABLE 3 STEPPED COUPLINGS**

DN	Reach		Barrel	End Ring	Fasteners
80-80	88-103	93-108	FC	FC	Gal
80-80	88-103	93-108	FC	FC	SS
80-100	88-103	109-133	FC	FC	Gal
80-100	88-103	109-133	FC	FC	SS
100-150	109-133	158-182	FC	FC	Gal
100-150	109-133	158-182	FC	FC	SS
125-250	123-147	158-182	FC	FC	Gal
125-150	123-147	158-182	FC	FC	SS
200-225	214-238	240-265	FC	FC	Gal
200-225	214-238	240-265	FC	FC	SS
200-300	214-238	310-334	SS	FC	SS
225-250	240-264	272-296	FC	FC	Gal
225-250	240-264	272-296	FC	FC	SS
250-300	272-296	310-334	SS	FC	SS
250-300	272-310	330-354	FC	SS	SS
300-300	310-334	330-354	FC	FC	Gal
300-300	310-334	330-354	FC	FC	SS
300-375	310-334	380-404	FC	SS	SS
300-350	342-366	360-384	SS	SS	SS
300-350	342-366	370-394	SS	SS	SS
350-375	370-394	396-420	SS	SS	SS
350-400	379-394	410-434	SS	SS	SS
375-375	380-404	410-434	SS	SS	SS
375-375	396-420	426-450	SS	SS	SS
375-375	410-434	436-460	SS	SS	SS
375-400	422-446	452-476	SS	SS	SS
450-600	447-471	620-644	SS	SS	SS
450-600	447-471	648-672	SS	SS	SS
450-450	466-490	488-512	SS	SS	SS
450-500	498-522	510-534	SS	SS	SS

DN	Reach		Barrel	End Ring	Fasteners
450-500	498-522	522-566	SS	SS	SS
500-500	510-534	542-566	SS	SS	SS
500-500	530-554	552-576	SS	SS	SS
500-525	552-576	574-598	SS	SS	SS
500-525	552-576	580-604	SS	SS	SS
500-525	552-576	596-620	SS	SS	SS
500-525	574-598	596-620	SS	SS	SS
525-600	574-598	658-682	SS	SS	SS
525-600	596-620	648-672	SS	SS	SS
525-600	596-620	648-672	SS	SS	SS
600-600	620-644	648-672	SS	SS	SS
600-700	658-682	700-724	SS	SS	SS
600-600	660-684	694-714	SS	SS	SS

**TABLE 4 FLANGED ADAPTORS**

DN	Reach	Barrel	End Ring	Fasteners
100	109-133	FC	FC	SS
150	158-182	FC	FC	SS
200	214-238	FC	FC	SS
225	240-264	FC	FC	SS
250	272-296	FC	FC	SS
300	330-354	FC	FC	SS
350	370-394	FC	SS	SS
375	396-420	SS	SS	SS
375	410-434	SS	SS	SS
375	436-460	SS	SS	SS
450	488-512	SS	SS	SS
500	552-576	SS	SS	SS
525	560-584	SS	SS	SS
525	574-598	SS	SS	SS
500	620-644	SS	SS	SS
600	658-682	SS	SS	SS

**TABLE 5 BLANK END COUPLINGS**

DN	Reach	Barrel	End Ring	Fasteners
80	88-103	FC	FC	SS

DN	Reach	Barrel	End Ring	Fasteners
100	109-133	FC	FC	SS
150	158-182	FC	FC	SS
200	214-238	FC	FC	SS
225	240-264	FC	FC	SS
250	272-296	FC	FC	SS
300	310-334	FC	FC	SS
300	330-354	SS	SS	SS
350	370-394	SS	SS	SS
375	396-420	SS	SS	SS
375	410-434	SS	SS	SS
400	436-460	SS	SS	SS
450	488-512	SS	SS	SS
450	498-522	SS	SS	SS
600	648-672	SS	SS	SS

#### 4 SCOPE OF THE APPRAISAL

This appraisal includes PN16 AVK Supa-Gib straight couplings, stepped couplings, flanged adaptors and blank end couplings in DN 80 to DN 675 sizes, as detailed in Tables 1 to 5 and included in the StandardsMark product schedule in Appendix B.

#### 5 APPRAISAL CRITERIA

##### 5.1 Quality Assurance Requirements

The WSAA Product Appraisal Technical Advisory Group accepts bolted unrestrained mechanical couplings for waterworks purposes manufactured in compliance with AS/NZS 4998:2009 *Bolted unrestrained mechanical couplings for water works purposes* and duly certified by means of an ISO Type 5 product certification scheme undertaken by a JAS-ANZ accredited Conformity Assessment Body (CAB) or by an international accreditation system recognised by JAS-ANZ.

The manufacturer is generally expected to have a production management and control system that has been duly accredited in accordance with AS/NZS ISO 9001 as a prerequisite to undergoing a product certification audit.

The ISO Type 5 Product Certification Scheme shall meet the criteria described in WSA TN-08.

##### 5.2 Performance Requirements

AVK Supa-Gib couplings have been appraised for compliance with AS/NZS 4998:2009 *Bolted unrestrained mechanical couplings for water works purposes*.

Appraisal criteria are also determined by the WSAA Infrastructure Products and Materials Network and regularly reviewed to ensure that the criteria reflect the requirements of WSAA members.

The following Product Specification is also relevant to this application:

*WSA PS 270 – Mechanical Couplings, Non-End Thrust Restraint for Pressure Applications- Drinking Water, Non-Drinking Water Supply and Sewerage*

A copy of the Product Specification is available at the following link:

<https://www.wsaa.asn.au/shop/product/60961>

## 6 COMPLIANCE WITH APPRAISAL CRITERIA

### 6.1 Compliance with Quality Assurance Requirements

AVK has submitted the following quality certificates:

- ISO 9001:2015 Certificate of Registration No. QEC 13894 issued to AVK Australia Holding Pty Ltd by SAI-Global.
- AS/NZS 4998:2009 StandardsMark Product Certification Licence No. SMKP 25236 issued to AVK Australia Holding Pty Ltd by SAI-Global.

Copies of the Quality Assurance and Product Certification licences have been included in Appendix B and are also available from WSAA.

Copies of Quality Assurance certificates have also been supplied for the component suppliers.

### 6.2 Compliance with Performance Requirements

#### 6.2.1 Type Tests

Type test reports have been submitted to demonstrate compliance with the requirements of AS/NZS 4998:2009 for each nominal size coupling from DN 80 to DN 675. The standard nominates that where a coupling range contains two or more couplings of the same nominal size a successful test on one coupling shall qualify the others, provided the same design criteria can be demonstrated. AVK has confirmed that the same design criteria have been used for the range of couplings. Each coupling, except DN 80, has a reach of 24mm. Tyco Water, a NATA certified laboratory, conducted the tests in 2010.

#### 6.2.2 Material Requirements

The AVK Supa-Gib Coupling range is manufactured using materials conforming to Table 2.1 of AS/NZS 4998. AVK has provided copies of material test reports to demonstrate compliance.

**TABLE 6 MATERIALS**

Component	Material	Grade	Standard
Barrel	Ductile Iron	450-10	AS1831
	Stainless Steel	316	ASTM A240M
End Rings	Ductile Iron	450-10	AS1831
	Stainless Steel	316	ASTM A240M
Flanged Adaptor	Ductile Iron	450-10	AS1831
End Cap	Ductile Iron	450-10	AS1831
Seals	Elastomer	NBR	AS1646
Fasteners	Stainless Steel	316	ASTM A240M

#### 6.2.3 Polymeric Coating

Ductile iron components are FBE coated in accordance with AS/NZS 4158 by AVK Adelaide.

The coating is Akzo Nobel Resicoat R4 Fusion Bonded Epoxy which has ISO Type 5 Product Certification. A copy of the licence is held on file by WSAA.

SAI-Global includes auditing of the coating operations during associated StandardsMark product certification surveillance audits.

A copy of the coating procedures and a sample of test results have been provided.

A type test report undertaken by Akzo Nobel has been submitted to demonstrate conformance with the process verification tests nominated in AS/NZS 4158.

#### **6.2.4 Elastomeric Seals**

The NBR elastomeric seals are manufactured by either AVK Gummi in Denmark or Thong Nhat Rubber Company Ruthimex in Vietnam (supplied by Gulf Rubber Australia).

AVK Gummi holds an AS 1646 WaterMark Certificate of Conformity issued by SAI-Global.

Gulf Rubber /Thong Nhat Rubber Company Ruthimex holds an AS 1646 ISO Type 5 Product Certification issued by SAI-Global.

These certificates are deemed acceptable to demonstrate compliance with AS 1646.

Copies of the certificates are held on file by WSAA.

#### **6.2.5 Effect on Water**

AS/NZS 4998 requires compliance with AS/NZS 4020.

A test report undertaken by Australian water Quality Centre (NATA Accreditation N0 1115) on 19<sup>th</sup> December 2019 for Gulf NBR 4811S material is held on file by WSAA to demonstrate compliance with AS/NZS 4020:2018.

A test report undertaken by Australian water Quality Centre (NATA Accreditation N0 1115) on 28<sup>th</sup> August 2020 for AVK Gummi NBR NAW80 material is held on file by WSAA to demonstrate compliance with AS/NZS 4020:2018.

A Certificate of Conformity issued by SAI-Global dated 19th September 2022 for Akzo Nobel Resicoat R4 is held on file by WSAA to demonstrate conformance with AS/NZS 4020:2018.

### **6.3 Design**

Vari-Gib couplings have a long and established history of supply within Australia and the Supa-Gib couplings are identical in design. The range consists of the following configurations.

- Short barrel DN 80 to DN 300.
- Long Barrel DN 80 to DN 675
- Stepped Couplings, DN 80 to DN 600.
- Flanged Adaptors DN100 to DN 600
- Blank End DN 80 to DN 600

#### **6.3.1 Coupling Barrel Lengths**

AS/NZS 4998 nominates minimum barrel lengths for both short and long barrel couplings and flanged adaptors. The AVK Supa-Gib couplings comply with these requirements. Details of barrel length, for each coupling, is nominated in the Data Sheets attached in Appendix A.

#### **6.3.2 Nominal Joint Deflection**

AS/NZS 4998 requires the manufacturer to nominate the maximum allowable joint deflection allowable at each coupling end, for both minimum and maximum pipe outside

diameters, within the nominated coupling reach. See Table 6 for allowable deflections of Supa-Gib couplings.

**TABLE 6**  
**ALLOWABLE JOINT DEFLECTIONS FOR EACH COUPLING END**

Nominal Pipe Size	Maximum Deflection, degrees, at:	
	Min Pipe OD	Max Pipe OD
80-350	3	3
375	2 ½	2 ½
450-525	2	2
600-675	1½	1½

### 6.3.3 Nominal Pipe Setting Gap.

A nominal pipe setting gap for AVK Supa-Gib couplings is given in the Data Sheets attached in Appendix A.

### 6.3.4 Leak tightness

When installed in accordance with the installation manual the couplings are designed to hold pressure with maximum deflection.

### 6.3.4 Fasteners

The fastener materials are Grade 316 stainless steel and the nuts are supplied coated with a Molybond galling prevention compound.

### 6.3.5 Welding

Welding of AVK Supa-Gib stainless steel barrels is carried out in accordance with AS/NZS 1554.6 and is capable of meeting the requirements of the inter-granular corrosion test specified in AS 2205.10.1. All stainless-steel barrels are passivated in accordance with ASTM A380. Test reports have been provided to demonstrate compliance.

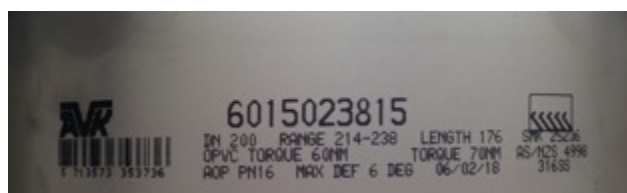
## 7 FITTING INSTRUCTIONS, TRAINING AND INSTALLATION

Installation instructions for AVK Supa-Gib couplings are attached in Appendix A.

## 8 PRODUCT MARKING

AVK Supa-Gib couplings have cast-in markings on the DI components while the Stainless-Steel components are marked using a stencil.

- Manufacturers Name: AVK
- Batch Identification: Date of manufacture e.g., 06-02-18
- Nominal Size: DN xxx
- The standard number: AS/NZS 4998
- Reach in millimetres: e.g., 158-182
- PN Rating: PN16
- Maximum angle of deflection: 6 deg
- StandardsMark logo



## FIGURE 1 PRODUCT MARKING

### 9 PACKAGING AND TRANSPORTATION

AVK Supa-Gib couplings are packaged on wooden pallets, protected by corrugated cardboard packing and shrink wrapping.

### 10 PRODUCT WARRANTY

The products are covered by the normal commercial and legal requirements of the *Competition and Consumer Act 2010 (Cth)*. Details of AVK 's warranty are included in their terms and conditions of sale.

### 11 WATER AGENCY EXPERIENCE WITH THE PRODUCT OR FIELD-TESTING REPORT

Vari-Gib couplings have been approved and used by most Australian Water Utilities for more than a decade and the Supa-Gib couplings are identical in design.

### 12 OUTCOMES OF EXPERT PANEL PRODUCT REVIEW

There are no outstanding issues.

### 13 FUTURE WORKS

There are no outstanding future items.

### 14 DISCLAIMER

This Product Appraisal Report (Report) is issued by the Water Services Association of Australia Limited on the understanding that:

This Report applies to the product(s) as submitted. Any changes to the product(s) either minor or major shall void this Report.

To maintain the recommendations of this Report any such changes shall be detailed and notified to the Product Appraisal Manager for consideration and review of the Report and appropriate action. Appraisals and their recommendations will be the subject of continuous review dependent upon the satisfactory performance of products.

WSAA reserves the right to undertake random audits of product manufacture and installation. Where products fail to maintain appraised performance requirements the appraisal and its recommendations may be modified and reissued. Appraisal reports will be reviewed and reissued at regular intervals not exceeding five (5) years.

The following information explains a number of very important limits on your ability to rely on the information in this Report. Please read it carefully and take it into account when considering the contents of this Report.

Any enquiries regarding this report should be directed to the Program Manager, Carl Radford, email [carl.radford@wsaa.asn.au](mailto:carl.radford@wsaa.asn.au).

#### 14.1 Issue of Report

This Report has been published and/or prepared by the Water Services Association of Australia Limited and nominated Project Manager and peer group of technical specialists (the Publishers).

The Report has been prepared for use within Australia only by technical specialists that have expertise in the function of products such as those appraised in the Report (the Recipients).

By accepting this Report, the Recipient acknowledges and represents to the Publisher(s) and each person involved in the preparation of the Report that the Recipient has understood and accepted the terms of this Disclaimer.

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in relation to the product or its specification including the requirements for product liability and professional indemnity insurance.

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## APPENDIX A – PRODUCT LITERATURE



### AVK SUPA-GIB STRAIGHT COUPLING

601



Supa-Gib straight coupling, PN16 to DN675 (738mm OD)  
Larger couplings to DN1200 (1314mm OD) available, see table below for PN rating  
For Cast Iron, Ductile Iron, Steel, PVC-U, PVC-M, PVC-O, AC and copper pipes



#### Use:

- For water and sewer applications to max 60°C
- Angular deflection up to + - 3 degrees (total 6 degrees)
- 16 bar / 160 meters allowable operating pressure (AOP) to 738mm OD
- Non restrained
- This product provides no longitudinal joint restraint



#### Standards and Approvals:

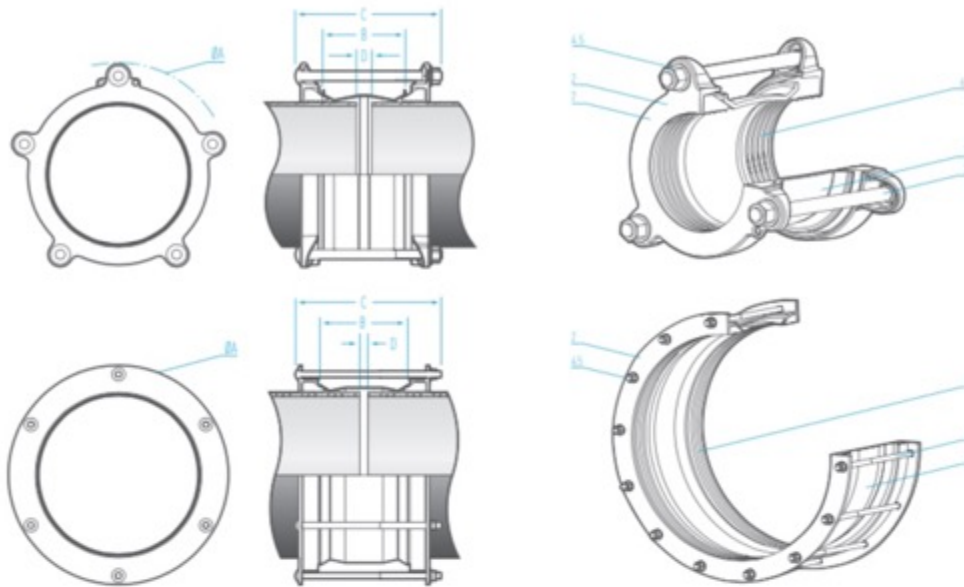
- All materials AS/NZS 4020 compliant
- Fully conforming to AS/NZS 4998:2009 bolted unrestrained mechanical couplings for waterworks purposes
- DN40 to DN675 Standards Licence Mark SMKP 25236 to AS 4998:2009



Expect... **AVK**

**AVK SUPA-GIB STRAIGHT COUPLING**

**601**



**Component list**

1. Barrel	Ductile Iron / AS 1831, 316 Stainless Steel / ASTM A240M	5. Washers	Steel - Galvanised / DIN 603 316 Stainless Steel / ISO 887 / ISO 7089
2. Flanges	Ductile Iron / AS 1831, 316 Stainless Steel / ASTM A276	6. Gasket	mild Steel - Galvanised Nitrile (NBR) compound, AS 1646 and AS/NZS 4020
3. Bolts	316 Stainless Steel / DIN 603, mild Steel - Galvanised / DIN 603	7. Coating	Fusion coated / AS/NZS 4158
4. Nuts	316 Stainless Steel / AS 1112.1, mild		

Components can be substituted with equivalent or higher class materials.

**Reference nos. and dimensions - Short Barrel**

AVK ref. nos.	DN mm	PN	Total angular deflection	Sealing range	Flange OD nominal A	Barrel length B	Bolt length C	Max. pipe gap D	Min. pipe gap D	Barrel material	Flange material	Bolts	No. bolts	Theoretic weight kg
601-5-0059-21-01	40	16	6	47-59	191	110	200	15	12	DI	DI	Gal	3	3
601-5-0059-21	40	16	6	47-59	191	110	200	15	12	DI	DI	SS	3	3
601-5-0071-21-01	50	16	6	59-71	198	110	200	15	12	DI	DI	Gal	3	3.3
601-5-0071-21	50	16	6	59-71	198	110	200	15	12	DI	DI	SS	3	3.3
601-5-0084-21-01	65	16	6	72-84	213	110	200	15	12	DI	DI	Gal	3	3.6
601-5-0084-21	65	16	6	72-84	213	110	200	15	12	DI	DI	SS	3	3.6
601-5-0103-21-01	80	16	6	88-103	238	110	240	15	12	DI	DI	Gal	3	4.9
601-5-0103-21	80	16	6	88-103	238	110	240	15	12	DI	DI	SS	3	4.9
601-5-0133-11-01	100	16	6	109-133	263	110	240	15	12	SS	DI	Gal	3	6
601-5-0133-11	100	16	6	109-133	263	110	240	15	12	SS	DI	SS	3	6
601-5-0147-21-01	125	16	6	123-147	277	110	240	15	12	DI	DI	Gal	3	7.5
601-5-0147-21	125	16	6	123-147	277	110	240	15	12	DI	DI	SS	3	7.5
601-5-0182-11-01	150	16	6	158-182	312	110	240	15	12	SS	DI	Gal	3	7.4
601-5-0182-11	150	16	6	158-182	312	110	240	15	12	SS	DI	SS	3	7.4
601-5-0194-21-01	150	16	6	170-194	324	110	240	15	12	DI	DI	Gal	3	9
601-5-0194-21	150	16	6	170-194	324	110	240	15	12	DI	DI	SS	3	9
601-5-0202-21-01	175	16	6	178-202	332	110	240	15	12	DI	DI	Gal	4	9.8
601-5-0202-21	175	16	6	178-202	332	110	240	15	12	DI	DI	SS	4	9.8
601-5-0238-13-01	200	16	6	214-238	371	136	240	30	15	SS	DI	Gal	5	11
601-5-0238-13	200	16	6	214-238	371	136	240	30	15	SS	DI	SS	5	11
601-5-0264-13-01	225	16	6	240-264	399	136	240	30	15	SS	DI	Gal	5	11.8
601-5-0264-13	225	16	6	240-264	399	136	240	30	15	SS	DI	SS	5	11.8
601-5-0334-15-01	300	16	6	310-334	490	176	300	80	15	SS	DI	Gal	6	20.8
601-5-0334-15	300	16	6	310-334	490	176	300	80	15	SS	DI	SS	6	20.8
601-5-0354-15-01	300	16	6	330-354	510	176	300	80	15	SS	DI	Gal	6	21.7
601-5-0354-15	300	16	6	330-354	510	176	300	80	15	SS	DI	SS	6	21.7

The design, materials and specifications shown are subject to change without notice due to the continuous development of our product program.

**AVK SUPA-GIB STRAIGHT COUPLING**

**601**

**Reference nos. and dimensions - Long Barrel**

AVK ref. nos.	DN mm	PN	Total angular deflection	Sealing range	Flange OD nominal A	Barrel length B	Bolt length C	Max. pipe gap D	Min. pipe gap D	Barrel material	Flange material	Bolts	No. bolts	Theoretic weight kg
601-5-0103-25-01	80	16	6	88-103	238	176	300	50	12	DI	DI	Gal	3	5.9
601-5-0103-25	80	16	6	88-103	238	176	300	50	12	DI	DI	SS	3	5.9
601-5-0133-15-01	100	16	6	109-133	263	176	300	50	12	SS	DI	Gal	3	6.7
601-5-0133-15	100	16	6	109-133	263	176	300	50	12	SS	DI	SS	3	6.7
601-5-0182-15-01	150	16	6	158-182	312	176	300	50	12	SS	DI	Gal	3	8.2
601-5-0182-15	150	16	6	158-182	312	176	300	50	12	SS	DI	SS	3	8.2
601-5-0238-15-01	200	16	6	214-238	371	176	300	50	15	SS	DI	Gal	5	12.1
601-5-0238-15	200	16	6	214-238	371	176	300	50	15	SS	DI	SS	5	12.1
601-5-0264-15-01	225	16	6	240-264	399	176	300	50	15	SS	DI	Gal	5	13
601-5-0264-15	225	16	6	240-264	399	176	300	50	15	SS	DI	SS	5	13
601-5-0296-15-01	250	16	6	272-296	431	176	300	50	15	SS	DI	Gal	6	14.6
601-5-0296-15	250	16	6	272-296	431	176	300	50	15	SS	DI	SS	6	14.6
601-5-0334-17-01	300	16	6	310-334	490	216	350	80	15	SS	DI	Gal	6	22.3
601-5-0334-17	300	16	6	310-334	490	216	350	80	15	SS	DI	SS	6	22.3
601-5-0354-17-01	300	16	6	330-354	510	216	350	80	15	SS	DI	Gal	6	23.3
601-5-0354-17	300	16	6	330-354	510	216	350	80	15	SS	DI	SS	6	23.3
601-5-0366-17-1	300	16	6	342-366	499	216	350	80	15	SS	SS	SS	8	31
601-5-0370-17-1	300	16	6	346-370	503	216	350	80	15	SS	SS	SS	8	31
601-5-0384-17-1	300	16	5	360-384	517	216	350	80	15	SS	SS	SS	8	34
601-5-0394-17-1	350	16	5	370-394	527	216	350	80	15	SS	SS	SS	8	35
601-5-0404-17-1	375	16	5	380-404	537	216	350	80	15	SS	SS	SS	8	35
601-5-0420-17-1	375	16	5	396-420	553	216	350	80	15	SS	SS	SS	8	36
601-5-0426-17-1	375	16	5	402-426	559	216	350	80	15	SS	SS	SS	8	37
601-5-0434-17-1	375	16	5	410-434	567	216	350	80	15	SS	SS	SS	8	37
601-5-0446-17-1	375	16	5	422-446	579	216	350	80	15	SS	SS	SS	8	38
601-5-0450-17-1	375	16	5	426-450	583	216	350	80	15	SS	SS	SS	8	41
601-5-0460-17-1	400	16	4	436-460	593	216	350	80	15	SS	SS	SS	10	46
601-5-0468-17-1	400	16	4	444-468	601	216	350	80	15	SS	SS	SS	10	47
601-5-0471-17-1	400	16	4	447-471	604	216	350	80	15	SS	SS	SS	10	47
601-5-0490-17-1	450	16	4	466-490	623	216	350	80	15	SS	SS	SS	10	49
601-5-0512-17-1	450	16	4	488-512	645	216	350	80	15	SS	SS	SS	10	51
601-5-0522-17-1	450	16	4	498-522	655	216	350	80	15	SS	SS	SS	10	51
601-5-0534-17-1	500	16	4	510-534	667	216	350	80	25	SS	SS	SS	12	53
601-5-0546-17-1	500	16	4	522-546	679	216	350	80	25	SS	SS	SS	12	54
601-5-0554-17-1	500	16	4	530-554	687	216	350	80	25	SS	SS	SS	12	55
601-5-0566-17-1	500	16	4	542-566	699	216	350	80	25	SS	SS	SS	12	56
601-5-0576-17-1	500	16	4	552-576	709	216	350	80	25	SS	SS	SS	12	57
601-5-0584-17-1	525	16	4	560-584	717	216	350	80	25	SS	SS	SS	12	57
601-5-0589-17-1	525	16	4	565-589	722	216	350	80	25	SS	SS	SS	12	58
601-5-0598-17-1	525	16	4	574-598	731	216	350	80	25	SS	SS	SS	12	59
601-5-0604-17-1	525	16	4	580-604	737	216	350	80	25	SS	SS	SS	12	63
601-5-0620-17-1	525	16	4	596-620	753	216	350	80	25	SS	SS	SS	14	67
601-5-0626-17-1	600	16	3	602-626	759	216	350	80	25	SS	SS	SS	14	68
601-5-0632-17-1	600	16	3	608-632	765	216	350	80	25	SS	SS	SS	14	68
601-5-0644-17-1	600	16	3	620-644	777	216	350	80	25	SS	SS	SS	14	69
601-5-0654-17-1	600	16	3	630-654	787	216	350	80	25	SS	SS	SS	14	70
601-5-0664-17-1	600	16	3	640-664	797	216	350	80	25	SS	SS	SS	14	71
601-5-0672-17-1	600	16	3	648-672	805	216	350	80	25	SS	SS	SS	14	72
601-5-0678-17-1	600	16	3	654-678	811	216	350	80	25	SS	SS	SS	14	72
601-5-0682-17-1	600	16	3	658-682	815	216	350	80	25	SS	SS	SS	14	73
601-5-0694-17-1	600	16	3	670-694	827	216	350	80	25	SS	SS	SS	14	74
601-5-0714-17-1	600	16	3	690-714	847	216	350	80	25	SS	SS	SS	14	76
601-5-0724-17-1	600	16	3	700-724	857	216	350	80	25	SS	SS	SS	16	77
601-5-0738-17-1	675	16	3	714-738	871	216	350	80	25	SS	SS	SS	16	79
601-5-0760-17-1	700	14	3	736-760	893	216	350	80	25	SS	SS	SS	16	81
601-5-0765-17-1	700	14	3	741-765	898	216	350	80	25	SS	SS	SS	16	81
601-5-0774-17-1	750	14	3	750-774	907	216	350	80	25	SS	SS	SS	16	82
601-5-0794-17-1	750	14	3	770-794	927	216	350	80	25	SS	SS	SS	16	84
601-5-0804-17-1	750	14	3	780-804	937	216	350	80	25	SS	SS	SS	16	85
601-5-0814-17-1	750	14	3	790-814	947	216	350	80	25	SS	SS	SS	16	85
601-5-0823-17-1	750	14	3	799-823	956	216	350	80	25	SS	SS	SS	16	86
601-5-0829-17-1	750	14	3	805-829	962	216	350	80	25	SS	SS	SS	16	87
601-5-0834-17-1	750	14	3	810-834	967	216	350	80	25	SS	SS	SS	16	87
601-5-0844-17-1	750	12	3	820-844	977	216	350	80	25	SS	SS	SS	18	89
601-5-0854-17-1	750	12	3	830-854	987	216	350	80	25	SS	SS	SS	18	90
601-5-0874-17-1	750	12	3	850-874	1007	216	350	80	25	SS	SS	SS	18	92
601-5-0884-17-1	750	12	3	860-884	1017	216	350	80	25	SS	SS	SS	18	93
601-5-0894-17-1	750	12	3	870-894	1027	216	350	80	25	SS	SS	SS	18	94
601-5-0924-17-1	900	12	3	900-924	1057	216	350	80	25	SS	SS	SS	18	96
601-5-0934-17-1	900	12	3	910-934	1067	216	350	80	25	SS	SS	SS	18	97
601-5-0944-17-1	900	12	3	920-944	1077	216	350	80	25	SS	SS	SS	18	98
601-5-0959-17-1	900	12	3	935-959	1092	216	350	80	25	SS	SS	SS	18	100
601-5-0969-17-1	900	12	3	945-969	1102	216	350	80	25	SS	SS	SS	18	100
601-5-0974-17-1	900	12	3	950-974	1107	216	350	80	25	SS	SS	SS	18	101

The designs, materials and specifications shown are subject to change without notice due to the continuous development of our product program.

**AVK SUPA-GIB STRAIGHT COUPLING****601**

AVK ref. nos.	DN mm	PN	Total angular deflection	Sealing range	Flange OD nominal A	Barrel length B	Bolt length C	Max. pipe gap D	Min. pipe gap D	Barrel material	Flange material	Bolts	No. bolts	Theoretic weight kg
601-5-0984-17-1	900	12	3	960-984	1117	216	350	80	25	SS	SS	SS	18	102
601-5-0994-17-1	900	12	3	970-994	1127	216	350	80	25	SS	SS	SS	18	103
601-5-1034-17-1	1000	10	3	1010-1034	1037	216	350	80	25	SS	SS	SS	22	108
601-5-1054-17-1	1000	10	3	1030-1054	1187	216	350	80	25	SS	SS	SS	22	110
601-5-1064-17-1	1000	10	3	1040-1064	1197	216	350	80	25	SS	SS	SS	22	111
601-5-1074-17-1	1000	10	3	1050-1074	1207	216	350	80	25	SS	SS	SS	22	112
601-5-1080-17-1	1000	10	3	1056-1080	1213	216	350	80	25	SS	SS	SS	22	112
601-5-1094-17-1	1000	10	2	1070-1094	1227	216	350	80	25	SS	SS	SS	22	114
601-5-1104-17-1	1000	10	2	1080-1104	1237	216	350	80	25	SS	SS	SS	22	115
601-5-1124-17-1	1100	10	2	1100-1124	1257	216	350	80	25	SS	SS	SS	22	116
601-5-1136-17-1	1100	10	2	1112-1136	1269	216	350	80	25	SS	SS	SS	22	117
601-5-1154-17-1	1100	10	2	1130-1154	1287	216	350	80	25	SS	SS	SS	22	119
601-5-1164-17-1	1100	10	2	1140-1164	1297	216	350	80	25	SS	SS	SS	22	120
601-5-1204-17-1	1100	10	2	1180-1204	1337	216	350	80	25	SS	SS	SS	22	123
601-5-1224-17-1	1200	10	1.5	1200-1224	1357	216	350	80	25	SS	SS	SS	22	125
601-5-1239-17-1	1200	9	1.5	1215-1239	1372	216	350	80	25	SS	SS	SS	24	128
601-5-1294-17-1	1200	9	1.5	1270-1294	1427	216	350	80	25	SS	SS	SS	24	132
601-5-1304-17-1	1200	9	1.5	1280-1304	1437	216	350	80	25	SS	SS	SS	24	133
601-5-1314-17-1	1200	9	1.5	1290-1314	1447	216	350	80	25	SS	SS	SS	24	134

The designs, materials and specifications shown are subject to change without notice due to the continuous development of our product program.

**AVK SUPA-GIB STEP COUPLING****602**

Supa-Gib step coupling, PN16 to DN675 (738mm OD)  
 Larger couplings to DN900 (969mm OD) available, see table below for PN rating  
 For Cast Iron, Ductile Iron, Steel, PVC-U, PVC-M, PVC-O, AC and copper pipes

**Use:**

- For water and sewer applications to max 60°C
- Angular deflection up to + - 3 degrees (total 6 degrees)
- 16 bar / 160 meters allowable operating pressure (AOP) to 738mm OD
- Non restrained
- This product provides no longitudinal joint restraint

**Standards and Approvals:**

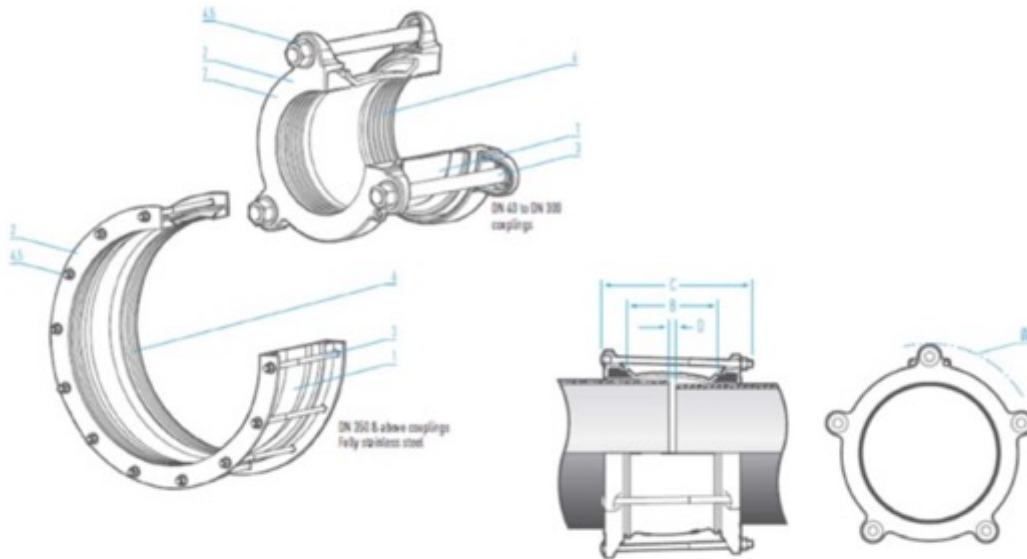
- All materials AS/NZS 4020 compliant
- Fully conforming to AS/NZS 4998:2009 bolted unrestrained mechanical couplings for waterworks purposes
- DN80 to DN300 Standards Licence Mark SMKP 25236 to AS 4998:2009



Expect... **AVK**

**AVK SUPA-GIB STEP COUPLING**

**602**



**Component list**

1. Barrel	Ductile Iron / AS 1831, 316 Stainless Steel / ASTM A240M	5. Washers	Steel - Galvanised / DIN 603 316 Stainless Steel / ISO 887 / ISO 7089
2. Flanges	Ductile Iron / AS 1831, 316 Stainless Steel / ASTM A276	6. Gasket	mild Steel - Galvanised Nitrile (NBR) compound, AS 1646 and AS/NZS 4020
3. Bolts	316 Stainless Steel / DIN 603, mild Steel - Galvanised / DIN 603	7. Coating	Fusion coated / AS/NZS 4158
4. Nuts	316 Stainless Steel / AS 1112.1, mild		

Components can be substituted with equivalent or higher class materials.

**Reference nos. and dimensions - Short Barrel**

AVK ref. nos.	DN mm	PN	Total angular deflection	Small end sealing	Large end sealing	Flange OD nominal	Barrel length B	Bolt length C	Max pipe gap D	Min pipe gap D	Barrel material	Flange material	Fastener	No. bolts
602-5-0103-0108-25-01	80-80	16	6	88-103	93-108	243	176	300	15	12	DI	DI	Gal	3
602-5-0103-0108-25	80-80	16	6	88-103	93-108	243	176	300	15	12	DI	DI	SS	3
602-5-0103-0133-25-01	80-100	16	6	88-103	109-133	263	176	300	15	12	DI	DI	Gal	3
602-5-0103-0133-25	80-100	16	6	88-103	109-133	263	176	300	15	12	DI	DI	SS	3
602-5-0133-0182-27-01	100-150	16	6	109-133	158-182	312	216	350	80	15	DI	DI	Gal	3
602-5-0133-0182-27	100-150	16	6	109-133	158-182	312	216	350	80	15	DI	DI	SS	3
602-5-0147-0182-27-01	125-150	16	6	123-147	158-182	312	216	350	80	15	DI	DI	Gal	3
602-5-0147-0182-27	125-150	16	6	123-147	158-182	312	216	350	80	15	DI	DI	SS	3
602-5-0238-0264-27-01	200-225	16	6	214-238	240-264	399	216	350	80	15	DI	DI	Gal	5
602-5-0238-0264-27	200-225	16	6	214-238	240-264	399	216	350	80	15	DI	DI	SS	5
602-5-0264-0296-27-01	225-250	16	6	240-264	272-296	431	216	350	80	15	DI	DI	Gal	6
602-5-0264-0296-27	225-250	16	6	240-264	272-296	431	216	350	80	15	DI	DI	SS	6
602-5-0296-0334-17	250-300	16	6	272-296	310-334	490	216	350	80	15	SS	DI	SS	6
602-5-0334-0354-27-01	300-300	16	6	310-334	330-354	510	216	350	80	15	DI	DI	Gal	6
602-5-0334-0354-27	300-300	16	6	310-334	330-354	510	216	350	80	15	DI	DI	SS	6
602-5-0366-0384-17-1	300-350	16	5	342-366	360-384	517	220	350	80	15	SS	SS	SS	8
602-5-0366-0394-17-1	300-350	16	5	342-366	370-394	527	220	350	80	15	SS	SS	SS	8
602-5-0394-0420-17-1	350-375	16	5	370-394	396-420	553	220	350	80	15	SS	SS	SS	8
602-5-0404-0434-17-1	375-375	16	5	380-404	410-434	567	220	350	80	15	SS	SS	SS	8
602-5-0420-0450-17-1	375-375	16	5	396-420	426-450	583	220	350	80	15	SS	SS	SS	8
602-5-0434-0460-17-1	375-375	16	4	410-434	436-460	593	220	350	80	15	SS	SS	SS	10
602-5-0446-0476-17-1	375-400	16	4	422-446	452-476	609	220	350	80	15	SS	SS	SS	10
602-5-0490-0512-17-1	450-450	16	4	466-490	488-512	645	220	350	80	15	SS	SS	SS	10
602-5-0522-0534-17-1	450-500	16	4	498-522	510-534	667	220	350	80	15	SS	SS	SS	12
602-5-0522-0546-17-1	450-500	16	4	498-522	522-546	679	220	350	80	15	SS	SS	SS	12

The designs, materials and specifications shown are subject to change without notice due to the continuous development of our product program.

**AVK SUPA-GIB STEP COUPLING****602**

AVK ref. nos.	DN mm	PN	Total angular deflection	Small end sealing	Large end sealing	Flange OD nominal	Bore length B	Bolt length C	Max pipe gap D	Min pipe gap D	Bore material	Flange material	Fastener	No. bolts
602-5-0534-0566-17-1	500-500	16	4	510-534	542-566	699	220	350	80	15	SS	SS	SS	12
602-5-0554-0576-17-1	500-500	16	4	530-554	552-576	709	220	350	80	15	SS	SS	SS	12
602-5-0576-0598-17-1	500-525	16	4	552-576	574-598	731	220	350	80	15	SS	SS	SS	12
602-5-0576-0604-17-1	500-525	16	4	552-576	580-604	737	220	350	80	15	SS	SS	SS	12
602-5-0598-0620-17-1	525-525	16	4	574-598	596-620	753	220	350	80	15	SS	SS	SS	14
602-5-0620-0644-17-1	525-600	16	3	596-620	620-644	777	220	350	80	15	SS	SS	SS	14
602-5-0644-0672-17-1	600-600	16	3	620-644	648-672	805	220	350	80	15	SS	SS	SS	14
602-5-0684-0714-17-1	600-600	16	3	660-684	690-714	847	220	350	80	15	SS	SS	SS	14
602-5-0738-0765-17-1	700-700	14	3	714-738	741-765	898	220	350	80	15	SS	SS	SS	16
602-5-0814-0834-17-1	750-750	14	3	790-814	810-834	967	220	350	80	15	SS	SS	SS	16
602-5-0844-0874-17-1	750-800	12	3	820-844	850-874	1007	220	350	80	15	SS	SS	SS	18
602-5-0944-0969-17-1	900-900	12	3	920-944	945-969	1102	220	350	80	15	SS	SS	SS	18

The designs, materials and specifications shown are subject to change without notice due to the continuous development of our product program.



**AVK SUPA-GIB FLANGED COUPLING****603**

Supa-Gib flange coupling, PN16 to DN600 (682mm OD)  
For Cast Iron, Ductile Iron, Steel, PVC-U, PVC-M, PVC-O, AC and copper pipes

**Use:**

- For water and sewer applications to max 60°C
- Angular deflection up to + - 3 degrees (total 6 degrees)
- 16 bar / 160 meters allowable operating pressure (AOP)
- Non restrained
- This product provides no longitudinal joint restraint

**Standards and Approvals:**

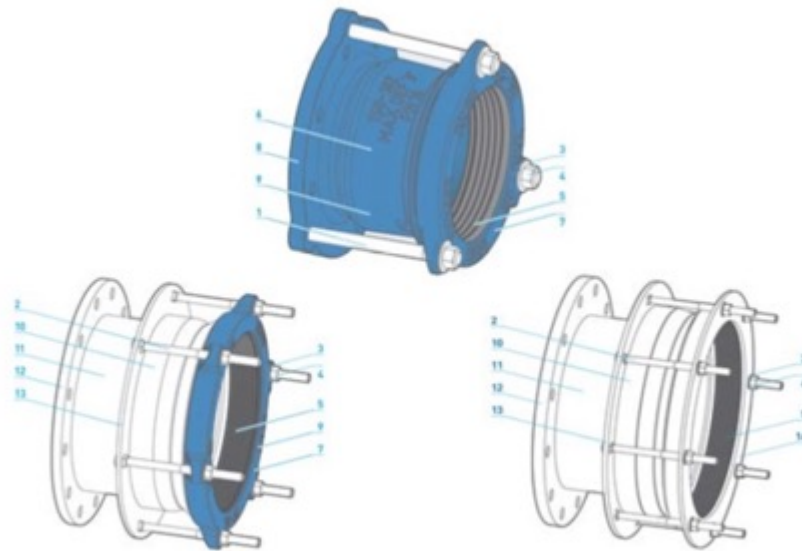
- All materials AS/NZS 4020 compliant
- Fully conforming to AS/NZS 4998:2009 bolted unrestrained mechanical couplings for waterworks purposes
- Flanges to AS/NZS 4087 PN16



Expect... **AVK**

**AVK SUPA-GIB FLANGED COUPLING**

**603**



**Component list**

1. Bolts - Hex	316 Stainless Steel / AS 1110.1	9. Coating	AS/NZS 4087
2. Bolts Carriage	316 Stainless Steel / DIN 603	10. Barrel	Fusion coated / AS/NZS 4158
3. Washers	316 Stainless Steel / ISO 887 / ISO 7089	11. Pipe	316 Stainless Steel / ASTM A240M
4. Nuts	316 Stainless Steel / AS 1112.1	12. Mating Flange	316 Stainless Steel / ASME B36.19M
5. Coupling Gasket	Nitrile (NBR) compound, AS 1646 and AS/NZS 4020	13. Centre Bolting Ring	316 Stainless Steel / ASTM A276
6. Body (Barrel & Flange)	Ductile Iron / AS 1831	14. Coupling Flange	316 Stainless Steel / ASTM A276
7. Coupling Flange	Ductile Iron / AS 1831		
8. Mating Flange	Ductile Iron / AS 1831 Flange Standard to		

Components can be substituted with equivalent or higher class materials.

**Reference nos. and dimensions**

AVK ref. nos.	DN mm	PN	Total angular deflection	Sealing range	Flange OD nominal	Overall length A	Barrel length B	Recommended pipe offset C	Barrel material	Flange material	Fastener	No. bolts
603-5-133-110	100	16	3	109-133	100	215	150	75	DI	DI	SS	3
603-5-182-115	150	16	3	158-182	150	215	150	75	DI	DI	SS	3
603-5-238-120-1	200	16	3	214-238	200	395	270	180	SS	DI	SS	5
603-5-264-122-1	225	16	3	240-264	225	395	270	180	SS	DI	SS	6
603-5-296-125-1	250	16	3	272-296	250	395	270	180	SS	DI	SS	6
603-5-354-130-1	300	16	3	330-354	300	395	270	180	SS	DI	SS	8
603-5-394-135-2	350	16	3	370-394	350	470	230	180	SS	SS	SS	8
603-5-420-125-2	375	16	3	396-420	250	470	230	180	SS	SS	SS	8
603-5-434-137-2	375	16	3	410-434	375	470	230	180	SS	SS	SS	10
603-5-460-137-2	375	16	3	436-460	375	470	230	180	SS	SS	SS	10
603-5-512-145-2	450	16	3	488-512	450	470	230	180	SS	SS	SS	12
603-5-576-150-2	500	16	3	552-576	500	470	230	180	SS	SS	SS	12
603-5-584-137-2	525	16	3	560-584	375	470	230	180	SS	SS	SS	12
603-5-598-150-2	525	16	3	574-598	500	470	230	180	SS	SS	SS	12
603-5-626-150-2	600	16	3	602-626	500	470	230	180	SS	SS	SS	14
603-5-644-150-2	600	16	3	620-644	500	470	230	180	SS	SS	SS	14
603-5-682-160-2	600	16	3	658-682	600	470	230	180	SS	SS	SS	14

The designs, materials and specifications shown are subject to change without notice due to the continuous development of our product program.

**AVK SUPA-GIB BLANK END****605**

Blank end, PN16 to DN300 (354mm OD)  
For Cast Iron, Ductile Iron, Steel, PVC-U, PVC-M, PVC-O, AC and copper pipes

**Use:**

- For water and sewer applications to max 60°C
- Angular deflection up to + - 3 degrees (total 6 degrees)
- 16 bar / 160 meters allowable operating pressure (AOP)
- Non restrained
- This product provides no longitudinal joint restraint

**Standards and Approvals:**

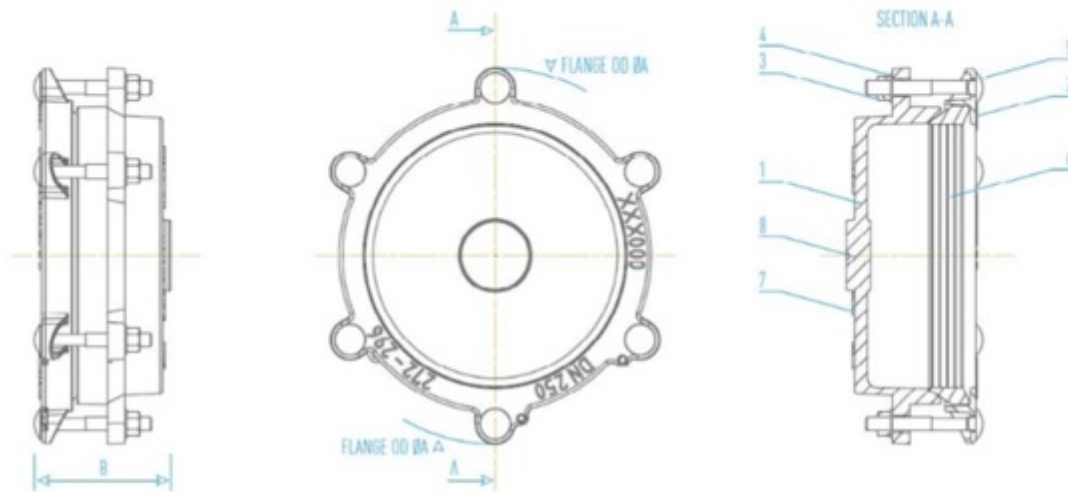
- All materials AS/NZS 4020 compliant
- Fully conforming to AS/NZS 4998:2009 bolted unrestrained mechanical couplings for waterworks purposes



Expect... **AVK**

**AVK SUPA-GIB BLANK END**

**605**



**Component list**

1. Body/end cap/barrel	Ductile Iron / AS 1831	5. Cup head bolts	316 Stainless Steel / DIN 603
2. Coupling flange	Ductile Iron / AS 1831	6. Coupling gasket	Nitrile (NBR) compound / AS 1646 & AS/NZS 4020
3. Nuts	316 Stainless Steel /anti-galling compound coated / AS 1112.1	7. Coating	Fusion coated / AS/NZS 4158
4. Washers	316 Stainless Steel / ISO 887 / ISO 7089	8. Tapping point	

Components can be substituted with equivalent or higher class materials.

**Reference nos. and dimensions**

AVK ref. nos.	DN mm	PN	Total angular deflection	Sealing range	Flange OD A	Overall length B	Barrel material	Flange material	Fasteners	No. bolts
605-5-103	80	16	3	88-103	238	140	DI	DI	SS	3
605-5-133	100	16	3	109-133	263	150	DI	DI	SS	3
605-5-182	150	16	3	158-182	312	150	DI	DI	SS	3
605-5-238	200	16	3	214-238	371	150	DI	DI	SS	5
605-5-264	225	16	3	240-264	399	150	DI	DI	SS	5
605-5-296	250	16	3	272-296	431	150	DI	DI	SS	6
605-5-334	300	16	3	310-334	490	150	DI	DI	SS	6
605-5-354	300	16	3	330-354	510	220	DI	DI	SS	6
605-5-354-1	300	16	3	330-354	510	220	SS	DI	SS	6
605-5-394-2	350	16	3	370-394	527	155	SS	SS	SS	8
605-5-420-2	375	16	3	396-420	553	155	SS	SS	SS	8
605-5-434-2	375	16	3	410-434	567	155	SS	SS	SS	8
605-5-460-2	400	16	3	436-460	593	155	SS	SS	SS	10
605-5-512-2	450	16	3	488-512	645	155	SS	SS	SS	10
605-5-522-2	450	16	3	498-522	655	155	SS	SS	SS	10

The designs, materials and specifications shown are subject to change without notice due to the continuous development of our product program.



## AVK SUPA-GIB COUPLINGS 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.

Expect... **AVK**

## AVK SUPA-GIB COUPLINGS INSTALLATION, OPERATION & MAINTENANCE MANUAL

### Generic Instructions

Please read ALL information in this guide prior to installation. Supa-Gib Couplings DO NOT provide axial pipe restraint, therefore if used above ground or in a non back-filled trench, ensure that BOTH the coupling and pipes are axially restrained by external means. AVK Supa-Gib Couplings are NOT suitable for use on HDPE pipe. Prior to use of any Supa-Gib Coupling on 'O'PVC pipe, please contact AVK to assess the suitability of the product application and for any special installation instructions. nitrile rubber seals are only recommended for use in temperature applications between -10°C and 60°C. Corrosive environments, including soils with a chloride content in excess of 1000ppm, can have a detrimental effect on 316 Stainless Steel. Where products are intended for use in such environments, additional advice should be sought from AVK prior to installation. It is recommended that periodic assessment and maintenance of the coupling be undertaken in such environments.

### Recommended Equipment:

- Tension Wrench (0-150Nm) & 24mm long thread socket
- Pipe surface cleaning equipment
- Gasket lubricant approved for use with potable water (required if factory applied lubricant has dried up due to prolonged storage)



**Straight Coupling**

**Step Coupling**



**Flange Adaptor**



**Blank End**

Expect... **AVK**

## AVK SUPA-GIB COUPLINGS INSTALLATION, OPERATION & MAINTENANCE MANUAL

### Initial Preparation

Clean the pipe surface, making sure it is as clean and free of soil and mud and scale as possible in order to enable the coupling gasket to successfully seal against the pipe surface.

#### 1. Reference Marks

Align the pipes to be joined, ensuring the pipe ends are concentric and the 'Recommended Pipe Gaps' (indicated below) are applied. Hold the coupling centrally across the aligned pipes and draw left and right coupling end locator marks on the pipe.

COUPLING	MINIMUM GAP mm	MAXIMUM GAP mm
601-5-0059 to 601-5-0202	12	15
601-5-0238 to 601-5-0296	15	30
601-5-0334 to 601-5-0554	15	80
601-5-0566 +	25	80

#### 2. Loosening the Coupling

Loosen the nuts sufficiently to the point where the coupling components are all slack and unrestricted. There is generally no need to dismantle the coupling prior to installation.

#### 3. Lubrication

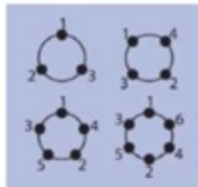
If the gaskets appear dry and/or adhere to the end flanges or barrel, lubricate all surfaces of the gasket with the approved lubricant as required.

#### 4. Insertion

Slide the loosely assembled coupling all the way up one of the pipes (generally the pre-installed pipe). Bring the other pipe (generally the new section of pipe being joined) into place, maintaining the 'Recommended Pipe Gaps' and concentricity between pipe ends. Slide the coupling down over the second pipe to a central position by matching the coupling ends to the locator marks on each pipe (Step 1).

#### 5. Tightening

Tighten the nuts in small increments in a diametric sequence as shown in the diagram below. Ensure that the coupling barrel and flanges are kept centred around the pipe. Be also mindful of the central location of the coupling in relation to the locator marks (Step 1).



#### 6. Re-tension & Final Check

For the final stage of the installation, tighten the bolts to the recommended tension specified in the table below (and on the barrels of Stainless Steel Supa-Gibs) using a Tension Wrench. ALWAYS RETENSION STUDS after 20 to 30 minutes in order to compensate the loss in initial tension due to rubber gasket relaxation.

COUPLING	'O'PVC Pipe (Nm)	All Other Pipe (Nm)
601-5-0059 to 601-5-0084	40	50
601-5-0103 to 601-5-0147	40	70
601-5-0182 to 601-5-0296	60	70
601-5-0310 +	70	80

Expect... **AVK**

## APPENDIX B - QUALITY CERTIFICATIONS

Copies of the following Quality Certificates are available from WSAA.

**TABLE B1 AVK AUSTRALIA HOLDING PTY LTD -  
MANAGEMENT SYSTEMS**

559A Grand Junction Rd Wingfield SA 5013	
Quality Systems Standard	ISO 9001:2015
Certification licence no.	QEC 13894
Certifying agency	SAI Global
First date of certification	30 April 2001
Current date of certification	15 June 2021
Expiry date of certification	14 February 2024

**TABLE B2 AVK AUSTRALIA HOLDING PTY LTD -  
PRODUCT CERTIFICATION**

Cnr Sanford Rd and Gibson St Wangaratta Vic,	
Product Standard/Spec	AS/NZS 4998:2009
Certificate No.	SMKP25236
Certifying Agency	SAI Global
First date of certification	24 February 2012
Current date of certification	21 February 2022
Expiry date of certification	23 February 2027





# CERTIFICATE OF REGISTRATION

This is to certify that:

## AVK Australia Holding Pty Ltd

ABN 11 081 236 777

### AVK Valves Pty Ltd

ABN 25 615 247 544

### AVK Flow Control Pty Ltd

ABN 80 153 707 398

### AVK CTS Pty Ltd

Trading as Complete Tapping Service

ABN 59 621 126 207

### AVK Wang Pty Ltd

ABN 29 605 784 343

### AVK Currumbin Pty Ltd

ABN 24 615 602 250

559A Grand Junction Road Wingfield SA 5013 AUSTRALIA

(Refer to Attachment to Certificate of Registration dated 26 June 2021 for additional certified sites)

operates a

### QUALITY MANAGEMENT SYSTEM

which complies with the requirements of

### ISO 9001:2015

for the following scope

The manufacture, marketing and sale of valves and associated products including stainless steel pipe couplings, tapping saddles and flange off take clamps and the provision of under pressure tapping, line stopping and valve insertion services.

### Certificate No: QEC13894

Issued: 26 June 2021

Originally Certified: 30 April 2001

Expires: 14 February 2024

Current Certification: 15 June 2021

Frank Camasta  
Global Head of Technical Services  
SAI Global Assurance



ISO 9001



JAS-ANZ



**Registered by:**

SAI Global Certification Services Pty Ltd (ACN 108 716 669) 680 George Street Sydney NSW 2000 Australia with SAI Global Pty Limited 680 George Street Sydney NSW 2000 Australia ("SAI Global") and subject to the SAI Global Terms and Conditions for Certification. While all due care and skill was exercised in carrying out this assessment, SAI Global accepts responsibility only for proven negligence. This certificate remains the property of SAI Global and must be returned to SAI Global upon its request. To verify that this certificate is current please refer to SAI Global On-Line Certification register at <http://register.saiglobal.com/>



The product schedule for this certification is 28 pages and has not been included here. The complete schedule may be obtained from AVK, WSAA or at the following link:

<https://register.saiglobal.com/Client/PrintSchedule/schedules/Temp/Certificate%20SMK40397%2020210519.pdf>



# STANDARDSMARK LICENCE

**SAI Global hereby grants:**

## **AVK Australia Holding Pty Ltd**

ABN 11 081 236 777

559A Grand Junction Road, Wingfield, SA 5013, Australia  
Cnr Sanford Road and Gibson Street, Wangaratta, VIC 3677, Australia

### **StandardsMark Licence**

Manufactured to:

**AS/NZS 4998:2009 - Bolted unrestrained mechanical couplings for waterworks purposes**

"the StandardsMark Licensee" the right to use the STANDARDSMARK as shown below only in respect of the goods described and detailed in the Schedule which are produced by the Licensee or on behalf of the Licensee\* and which comply with the appropriate Standard referred to above as from time to time amended. The Licence is granted subject to the rules governing the use of the STANDARDSMARK and the Terms and Conditions for certification and licence. The Licensee covenants to comply with all the Rules and Terms and Conditions.

**Licence No: SMKP25236**

**Issued : 21 February 2022**  
**Expires : 23 February 2027**

**Originally Certified : 24 February 2012**  
**Current Certification : 21 February 2022**

Calin Moldovean  
President, Business Assurance  
SAI Global Assurance



\* For details of manufacture, refer to the licensee

The STANDARDSMARK is a registered certification trademark of SAI Global Pty Limited (A.C.N. 050 644 642) and is issued under licence by SAI Global Certification Services Pty Limited (ACN 108 716 669) ("SAI Global") 680 George Street, Sydney NSW 2000, GPO Box 5420 Sydney NSW 2001. This certificate remains the property of SAI Global and must be returned to SAI Global upon its request. Refer to [www.saiglobal.com](http://www.saiglobal.com), for the list of product models.



## **APPENDIX C – SUPPLIER CONTACTS**

### **AVK AUSTRALIA HOLDING PTY LTD**

559A Grand Junction Road, Wingfield, SA

Tel: (08) 8368 0900

Email: [enquiries@avkau.com.au](mailto:enquiries@avkau.com.au)

Website: [www.avkcivil.com.au/en-au](http://www.avkcivil.com.au/en-au)



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[www.wsaa.asn.au](http://www.wsaa.asn.au)