

AVK Australia Holding Pty Ltd

PRODUCT APPRAISAL REPORT 2402

Wafer and Lugged Butterfly Valves

AS 4795.1:2011 Butterfly valves for waterworks purposes Part 1: Wafer and lugged

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Name/Title	Organisation	Date
Product Appraisal Technical Advisory Group	WSAA	20 March 2024
WSAA Expert Panel	WSAA	20 March 2024
Peter Pittard, WSAA Consultant	WSAA	5 March 2024
Carl Radford, Product Appraisal Manager	WSAA	22 March 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 Global Group, an international manufacturer of valves and fittings for the water, gas, sewerage and fire protection industries.

This appraisal is for a range of wafer and lugged butterfly valves manufactured in conformance with AS 4795.1:2011 *Butterfly valves for waterworks purposes Part 1: Wafer and lugged.*

The valves are manufactured by AVK Anhui in China.

The PN16 resilient seated seal-on-body butterfly valves include sizes from DN 50 to DN 400 for wafer style valves and DN 50 to DN 300 for lugged style valves.

Details of the valve range is provided in Section 3.

AVK Australia and AVK Anhui both hold ISO 9001 Quality Management System Licences.

The AVK range of butterfly valves has ISO Type 5 StandardsMark Product Certification to AS 2638.2-2011 *Butterfly valves for waterworks purposes Part 1: Wafer and lugged.*

This Appraisal has determined that AVK wafer and lugged butterfly valves, as detailed in this report, meet the requirements of WSA PS 263 *Butterfly Valves for Pressure Applications – Drinking Water and Non-Drinking Water Supply* and are considered as 'fit-for-purpose'.

1.1 Recommendations

It is recommended that WSAA members, subject to any specific requirements of the member, accept or authorise AVK PN16 wafer and lugged butterfly valves, as detailed in this report, for use in pressure water supply and treated wastewater applications, provided they are installed in accordance with WSAA Codes and the manufacturers requirements, where specified.

2 THE APPLICANT

The Applicant is AVK Australia Holding Pty Ltd.

2.1 The Supplier

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 range of wafer and lugged butterfly valves are manufactured at the AVK Anhui manufacturing facility in China.

2.2 The Manufacturer

AVK Valves (Anhui) Co Ltd. was established in 2001 and is a wholly owned subsidiary of the AVK Group in Denmark. It has developed into the Group's largest overseas production base and includes a valve factory, fitting factory and machining factory.

3 THE PRODUCT

This appraisal is for a range of wafer and lugged butterfly valves manufactured in conformance with AS 4795.1:2011 *Butterfly valves for waterworks purposes Part 1: Wafer and lugged.*

The PN16 resilient seated seal-on-body butterfly valves include sizes from DN 50 to DN 400 for wafer style valves and DN 50 to DN 300 for lugged style valves.

The valves in sizes DN 50 to DN 200 are supplied with a manual lever and 8 position notch plate. Larger size valves are supplied with a worm gearbox operated by a self-locking handwheel. Other gearbox and actuation gearboxes can also be supplied. See Figure 1and Table 1.



FIGURE 1 WAFER AND LUGGED BUTTERFLY VALVES

DN	Wafer	Lugged	Face to Face mm
50	\checkmark	\checkmark	43
65	\checkmark	\checkmark	46
80	\checkmark	\checkmark	46
100	\checkmark	\checkmark	52
125	\checkmark	\checkmark	56
150	\checkmark	\checkmark	56
200	\checkmark	\checkmark	60
250	\checkmark	\checkmark	68
300	\checkmark	\checkmark	78
350	\checkmark		78
400	\checkmark		102

TABLE 1 RANGE OF WAFER AND LUGGED BUTTERFLY VALVES

The valves incorporate a one-piece replaceable EPDM loose liner that wraps around the body of the valve to form a seal with adjoining flanges.

The ductile iron components are coated with a thermal bonded polymeric coating.

The lugged valves are tapped for compatibility with Figure B5 of AS/NZS 4087:2011 *Metallic flanges for waterworks purposes.* End connections can be provided to accommodate other flange drillings.

Face to face dimensions comply with ISO 5752 Series 20, as specified in AS 4795.1.

4 SCOPE OF THE APPRAISAL

The scope of this appraisal includes PN16 resilient seated seal-on-body wafer and lugged butterfly valves in sizes from DN 50 to DN 400 as detailed in Section 3 and included in the ISO Type 5 StandardsMark Product Certification schedule in Appendix B.

5 APPRAISAL CRITERIA

5.1 Quality Assurance Requirements

The WSAA Product Appraisal Technical Advisory Group accepts wafer and lugged butterfly valves manufactured in compliance with AS 4795.1:2011 *Butterfly valves for waterworks purposes Part 1: Wafer and lugged* 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 butterfly valves have been appraised for compliance with AS 4795.1:2011 *Butterfly* valves for waterworks purposes Part 1: Wafer and lugged.

Appraisal criteria are also determined by the WSAA Product Appraisal Technical Advisory Group 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 263 Butterfly Valves for Pressure Applications – Drinking Water and Non-Drinking Water Supply

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. QEC13894 issued to AVK Australia Holding Pty Ltd by Intertek SAI Global.
- ISO 9001:2015 Certificate of Registration No.FM84039 issued to AVK Valves (Anhui) Co Ltd by BSI.
- AS 4795.1:2011 ISO Type 5 StandardsMark Product Certification Licence No. SMK26887issued 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 Components material list

The AVK butterfly valves material specifications are detailed below and are deemed to meet the minimum requirements specified in AS 4795.1. Material test certificates from ISO/IEC 17025 accredited laboratories have been submitted to demonstrate compliance with the material specifications.

TABLE 2	
---------	--

Component	Material	Standard	Grade
Body	Ductile iron	AS 1831	500-7
Coating	Polymeric coating	AS/NZS 4158	FBE
Disc	Stainless steel	ASTM A351	316
Shaft	Stainless steel	ASTM A276	431
Shaft Bearings	Stainless steel PTFE coated	ASTM 276	316
Liner	Elastomer	AS 1646	EPDM
O-rings	Elastomer	AS 1646	NBR
Fasteners	Stainless Steel	ASTM A276	A4
Internal components	Stainless Steel	ASTM A276	316
Handle	Composite	-	Polyamide 6.6
Notch plate	Stainless steel	ASTM A276	304

AVK BUTTERFLY VALVES COMPONENT MATERIAL LIST

6.2.2 Polymeric thermal bonded coatings

AVK butterfy valves are coated with Akzo Nobel Resicoat R4, a thermosetting epoxy powder coating.

Akzo Nobel Resicoat R4 has StandardsMark product certification to AS/NZS 4158:2003 *Thermal-bonded polymeric coatings on valves and fittings for water industry purposes,* issued by SAI-Global. A copy of the certification is held on file by WSAA.

The coating is applied in-house by AVK at the Anhui facilities.

AVK has supplied a copy of the coating application procedures and typical production test reports to demonstrate that application complies with AS/NZS 4158

Application procedures are audited by SAI-Global in conjunction with the StandardsMark certification procedures.

6.2.3 Type tests

AVK has submitted copies of Type Test reports to demonstrate compliance with the performance requirements of AS 4795.1:2011. National Centre for Inspection and Testing of Drainage Irrigation and Water Saving Equipment Products Quality (CNAS Accreditation No. L0606) carried out the testing.

Tests conducted on each valve size included body strength test, free end seal test, disc strength test, shaft strength test, valve operational test and sealing test.

6.2.4 Contact with drinking water

AVK has submitted a copy of a test report dated 3rd February 2023 undertaken by National Centre for Inspection and Testing of Drainage Irrigation and Water Saving Equipment

9

7 FITTING INSTRUCTIONS, TRAINING AND INSTALLATION

Butterfly valves are commonly installed throughout water supply networks. Installation, operation and maintenance is well understood by experienced installers and operators.

8 PRODUCT MARKING

The following markings are cast into the valve body:

Manufacturers Name: AVK

Nominal size: e.g., DN 100

Pressure Class: PN16

The following markings are provided on a stainless-steel plate fixed to the valve body:

Standard No: AS 4795.1

Year of manufacture: e.g., 2024

In addition, a permanent adhesive label attached to the body, contains product certification details, bar code and other information. See Figure 2 as an example.

The marking complies with AS 4795.1 requirements.



EXAMPLE OF ADDITIONAL MARKING

9 PACKAGING AND TRANSPORTATION

AVK butterfly valves are packed onto pallets using corrugated cardboard or similar material to avoid contact and to act as a separation to prevent damage during transport. The pallets are then shrink-wrapped.

10 PRODUCT WARRANTY

The products are covered by the normal commercial and legal requirements of the *Competition and Consumer Act 2010 (Cth)*, which covers manufacture to the relevant standard and details of AVK's warranty is included in their terms and conditions of sale.

11 WATER AGENCY EXPERIENCE WITH THE PRODUCT OR FIELD TESTING REPORT

Wafer and lugged butterfly valves have been utilised within the Australian Water Industry for many years. This Appraisal is a pre-requisite to seek Australian Water Agency acceptance or authorisation.

12 OUTCOMES OF EXPERT PANEL PRODUCT REVIEW

No issues were raised.

13 FUTURE WORKS

No future works have been identified.

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.

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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Recipients should also independently verify and assess the appropriateness of any recommendation in the Report, especially given that any recommendation will not take into account a Recipient's particular needs or circumstances.

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14.3 No Updating

Neither the Publisher(s) nor any person involved in the preparation of this Report [has] [have] any obligation to notify you of any change in the information contained in this Report or of any new information concerning the Publisher(s) or the Product or any other matter.

14.4 No Warranty

The Publisher(s) do[es] not, in any way, warrant that steps have been taken to verify or audit the accuracy or completeness of the information in this Report, or the accuracy, completeness or reasonableness of any recommendation in this Report.

APPENDIX A – PRODUCT LITERATURE



AVK CONCENTRIC BUTTERFLY VALVE, WAFER TYPE, DN50-DN400

76/70-010

SS Disc, EPDM Liner, A4 Fasteners, PN16, AS 2129 D/E

The AVK Series 76 is a wide range of concentric, loose liner butterfly valves available in both wafer and lug design, fitted with AVK's high quality EPDM rubber liner that significantly increases the service life. The one-piece replaceable liner also serves as a profiled flange gasket and is also available in hydrocarbon resistant NBR. Disc material is stainless steel 316. The shaft in stainless steel, installed in low friction PTFE bearings in an anti-blow out design, plus the unique disc sealing profile, results in low operating torque and long life.

Product description:

Loose liner butterfly valve for neutral liquids like drinking water, river water and treated wastewater free from solids and fibrous impurities to max 70°C

- Standards:
- Face to face according to EN 558 Table 2 Basic Series 20
- End connection to EN 1092-2 PN10/16, AS 2129 Table D/E, ASME B16.1 CL125/150

Test/Approvals:

- Production test according to AS 4795.1 Body: 1,5 x PN, Sealing/Reverse: 1.1 x PN
- StandardsMark approved to AS 4795.1
- WaterMark approved to AS 4795.1

Features:

- Body in ductile iron, GJS 500-7
- Loose, replaceable liner in drinking water approved EPDM with reinforced seating area and integrated, profiled flange gaskets
- Shaft seal integrated in the liner
- · Anti-blow-out shaft design with an anti blow-out plate at the top and a plug at the bottom
- Radial bearings in low friction stainless steel/PTFE composite
- Shaft in stainless steel, 1.4057 (431)
- Disc in cast stainless steel, 1.4408 (316L)
- · Slim disc design with internal hexagon for drive shaft connection
- DN≤200: Hand lever with 8 position notch plate
- DN>200: Self-locking handwheel operated worm gearbox
- IP67 Rotork Gearbox
- Blue RAL 5017 epoxy coating to AS/NZS 4158
- Approved to AS/NZS 4020

Accessories:

IP68 Gearbox and Actuation options available on request

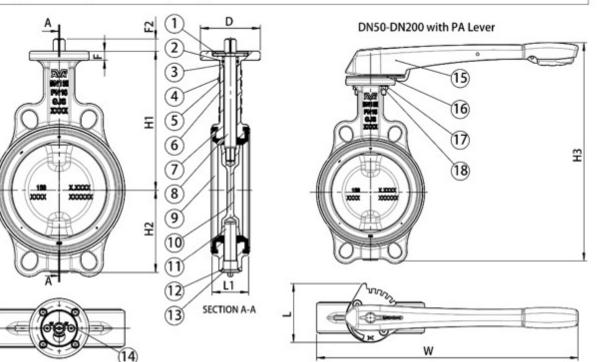


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AVK CONCENTRIC BUTTERFLY VALVE, WAFER TYPE, DN50-DN400

76/70-010

SS Disc, EPDM Liner, A4 Fasteners, PN16, AS 2129 D/E



Component list:

1.	Plate (1)	POM	12. O-ring (2) NBR rubl	ber
2.	O-ring	NBR rubber	13. Plug Stainless	steel A4
3.	Ring	POM	14. Bolt Stainless	steel A4
4.	Rivet	Stainless steel A4	15. Lever (3) PA 6.6	
5.	Name plate	Stainless steel 304	16. Notch plate (3) Stainless	steel 304
6.	Body	Ductile iron GJS-500-7	17. Washer Stainless	steel A4
7.	Bearing	Stainless steel / PTFE coated	18. Nut Stainless	steel A4
8.	Shaft, drive	Stainless steel 1.4057	19. O-ring (4) NBR rub	ber
9.	Liner	EPDM rubber	20. Spacer (4) PA 6.6	
10.	Disc	Stainless steel 1.4408	21. Gearbox (5) Aluminiur	m
11.	Shaft, stub	Stainless steel 1.4057		
-				

Components may be substituted with equivalent or higher class materials without prior notification.

Reference nos. and dimensions:

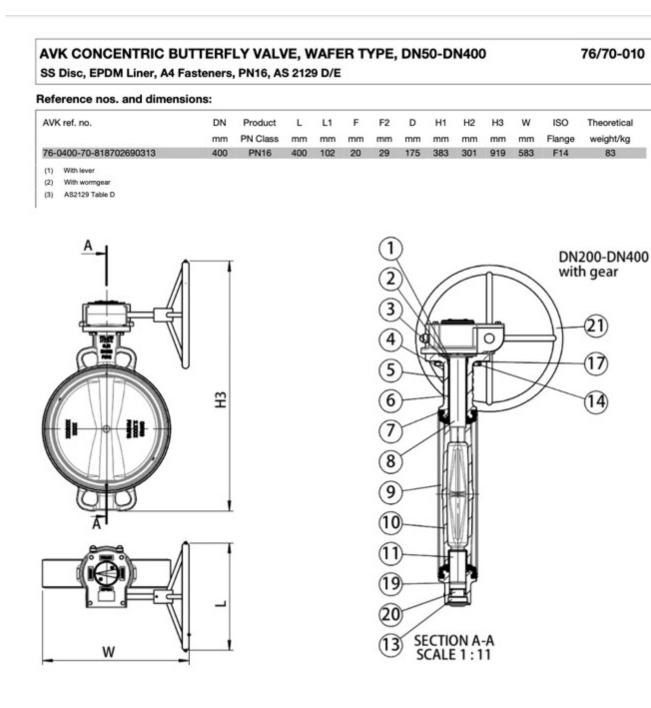
AVK ref. no.		DN	Product	L	L1	F	F2	D	H1	H2	H3	W	ISO	Theoretical
		mm	PN Class	mm	mm	mm	mm	mm	mm	mm	mm	mm	Flange	weight/kg
76-0050-70-818702690301		50	PN16	83	43	12	12	67	125	65	246	258	F05	2.2
76-0065-70-818702690301		65	PN16	83	46	12	12	67	150	78	291	264	F05	2.8
76-0080-70-818702690301		80	PN16	83	46	12	12	67	157	85	306	268	F05	3.5
76-0100-70-818702690301		100	PN16	109	52	14	17	90	182	98	351	323	F07	5.3
76-0125-70-818702690301		125	PN16	110	56	14	19	92	201	114	384	328	F07	6.8
76-0150-70-818702690301		150	PN16	110	56	14	19	92	214	127	413	491	F07	8.1
76-0200-70-818702690301	(1)	200	PN16	110	60	14	23	92	245	157	476	518	F07	13
76-0200-70-818702690326	(2)	200	PN16	200	60	14	23	92	245	157	531	257	F07	14
76-0250-70-818702690326		250	PN16	220	68	14	28	130	283	194	608	310	F10	23
76-0250-70-818742690326	(3)	250	PN16	220	68	14	28	130	283	194	604	310	F10	23
76-0300-70-818702690326		300	PN16	220	78	14	28	130	308	219	674	365	F10	32
76-0350-70-818702690326		350	PN16	400	78	16	29	150	354	272	864	469	F12	50

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

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76/71-015

SS Disc, EPDM Liner, A4 Fasteners, PN16, AS 2129 D/E

The AVK Series 76 is a wide range of concentric, loose liner butterfly valves available in both wafer and lug design, fitted with AVK's high quality EPDM rubber liner that significantly increases the service life. The one-piece replaceable liner also serves as a profiled flange gasket and is also available in hydrocarbon resistant NBR. Disc material is stainless steel 316. The shaft in stainless steel, installed in low friction PTFE bearings in an anti-blow out design, plus the unique disc sealing profile, results in low operating torque and long life.

Product description:

Loose liner butterfly valve for neutral liquids like drinking water, river water and treated wastewater free from solids and fibrous impurities to max 70°C

Standards:

- Face to face according to EN 558 Table 2 Basic Series 20
- Flange drilling to AS 2129 Table D/E
- Test/Approvals:
- Production test according to AS 4795.1 Body: 1,5 x PN, Sealing/Reverse: 1.1 x PN
- StandardsMark approved to AS 4795.1
- WaterMark approved to AS 4795.1 ٠

Features:

- Body in ductile iron, GJS 500-7
- Loose, replaceable liner in drinking water approved EPDM with reinforced seating area and integrated, profiled flange ٠ gaskets
- Shaft seal integrated in the liner ٠
- Anti-blow-out shaft design with an anti blow-out plate at the top and a plug at the bottom ٠
- Radial bearings in low friction stainless steel/PTFE composite ٠
- Shaft in stainless steel, 1.4057 (431) .
- Disc in cast stainless steel, 1.4408 (316L)
- Slim disc design with internal hexagon for drive shaft connection
- DN≤200: Hand lever with 8 position notch plate
- DN>200: Self-locking handwheel operated worm gearbox ٠
- IP67 Rotork Gearbox ٠
- Blue RAL 5017 epoxy coating to AS/NZS 4158 .
- Approved to AS/NZS 4020 -

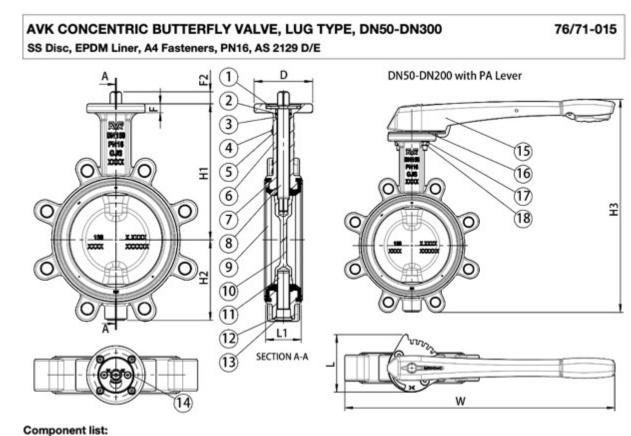
Accessories:

IP68 Gearbox and Actuation options available on request



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

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1.	Plate (1)	POM	11. Shaft, stub	Stainless steel 1.4057
2.	O-ring	NBR rubber	12. O-ring	NBR rubber
3.	Ring	POM	13. Plug	Stainless steel A4
4.	Rivet	Stainless steel A4	14. Bolt	Stainless steel A4
5.	Name plate	Stainless steel 304	15. Lever (2)	PA 6.6
6.	Body	Ductile iron GJS-500-7	16. Notch plate (2)	Stainless steel 304
7.	Bearing	Stainless steel / PTFE coated	17. Washer	Stainless steel A4
8.	Shaft, drive	Stainless steel 1.4057	18. Nut	Stainless steel A4
9.	Liner	EPDM rubber	19. Gearbox	Aluminium
10.	Disc	Stainless steel 1.4408		

Components may be substituted with equivalent or higher class materials without prior notification.

Reference nos. and dimensions:

AVK ref. no.		DN	Flange	L	L1	F	F2	D	H1	H2	H3	W	ISO	Theoretical
		mm	drilling	mm	mm	mm	mm	mm	mm	mm	mm	mm	Flange	weight/kg
76-0050-71-838740690301		50	AS2129 D/E	83	43	12	12	67	125	65	246	252	F05	2.6
76-0065-71-838740690301		65	AS2129 D/E	83	46	12	12	67	150	78	284	259	F05	3.2
76-0080-71-838740690301		80	AS2129 D/E	83	46	12	12	67	157	85	296	262	F05	3.5
76-0100-71-838740690301		100	AS2129 E	109	52	14	17	90	182	98	344	341	F07	6.5
76-0100-71-838742690301		100	AS2129 D	109	52	14	17	90	182	98	341	320	F07	5.6
76-0125-71-838740690301		125	AS2129 D/E	110	56	14	19	92	201	114	378	356	F07	9.1
76-0150-71-838740690301		150	AS2129 E	110	56	14	19	92	214	127	408	518	F07	10
76-0150-71-838742690301		150	AS2129 D	110	56	14	19	92	214	127	408	518	F07	10
76-0200-71-838740690301		200	AS2129 E	110	60	14	23	92	245	157	468	545	F07	15
76-0200-71-838740690326	(2)	200	AS2129 E	200	60	14	23	92	245	157	523	310	F07	16
76-0200-71-838742690301		200	AS2129 D	110	60	14	23	92	245	157	468	545	F07	15
76-0200-71-838742690326	(2)	200	AS2129 D	200	60	14	23	92	245	157	523	310	F07	16
76-0250-71-838740690326		250	AS2129 E	220	68	14	28	130	283	194	605	386	F10	29

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

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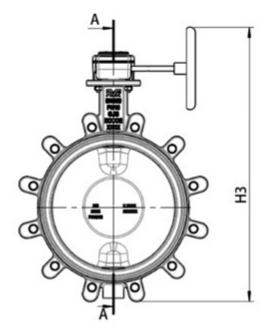
Reference nos. and dimensions:

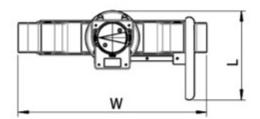
AVK CONCENTRIC BUTTERFLY VALVE, LUG TYPE, DN50-DN300 SS Disc, EPDM Liner, A4 Fasteners, PN16, AS 2129 D/E

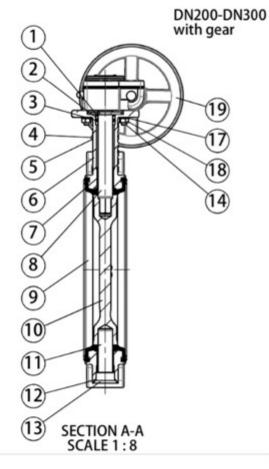
76/71-015

AVK ref. no.	DN	Flange	L	L1	F	F2	D	H1	H2	H3	w	ISO	Theoretica
	mm	drilling	mm	mm	mm	mm	mm	mm	mm	mm	mm	Flange	weight/kg
76-0250-71-838742690326	250	AS2129 D	220	68	14	28	130	283	194	605	370	F10	29
76-0300-71-838740690326	300	AS2129 E	220	78	14	28	130	308	219	663	455	F10	41
76-0300-71-838742690326	300	AS2129 D	220	78	14	28	130	308	219	663	455	F10	41

(2) With wormgear







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

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APPENDIX B - QUALITY CERTIFICATIONS

Copies of the following Quality Certificates are also available from WSAA.

TABLE B1 AVK AUSTRALIA HOLDING PTY LTD – MANAGEMENT SYSTEMS

559A	559A Grand Junction Road, Wingfield, SA							
Quality Systems Standard	ISO 9001:2015							
Certification Licence No.	QEC13894							
Certifying Agency	Intertek SAI Global							
First Date of Certification	30 April 2001							
Current Date of Certification	4 March 2024							
Expiry Date of Certification	14 February 2027							

TABLE B2 AVK VALVES (ANHUI) CO LTD- MANAGEMENT SYSTEMS

Wujiang Industrial Park Hexian Ma'anshan City Anhui China				
Quality Systems Standard	ISO 9001:2015			
Certification Licence No.	FM 84039			
Certifying Agency	BSI			
First Date of Certification	9 July 2004			
Current Date of Certification	8 October 2021			
Expiry Date of Certification	7 October 2024			

TABLE B3 AVK AUSTRALIA HOLDING PTY LTD – PRODUCT CERTIFICATION

559A Grand Junction Road, Wingfield, SA				
Product Standard/Spec.	AS 4795.1:2011			
Certificate No.	SMK26887			
Issuing Certification Body	SAI Global			
First Date of Certification	20 September 2023			
Current Date of Certification	20 September 2023			
Expiry Date of Certification	19 September 2028			

CERTIFICATE OF REGISTRATION

This is to certify that the management system of:

AVK Australia Holding Pty Ltd

AVK Valves Pty Ltd ABN 25 615 247 544 AVK Industrial 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

Main Site: 559A Grand Junction Road, Wingfield, South Australia, 5013, Australia

See appendix for additional sites and additional site scopes

has been registered by INTERTEK SAI Global as conforming to the requirements of:

ISO 9001:2015

The management system is applicable to:

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 Number: QEC13894

Initial Certification Date: 30 April 2001

Intertek

SAI GLOBAL

Date of Certification Decision: 4 March 2024

Issuing Date: 4 March 2024

Valid Until: 14 February 2027



Calin Moldovean President, Business Assurance

SAI Global Certification Services Pty. Ltd. Level 7 Suite 7.01 45 Clarence Street Sydney NSW 2000 Australia



In the issuance of this certificate, INTERTEK SAI Global assumes no liability to any party other than to the Client, and then only in accordance with the agreed upon Certification Agreement. This certificate's validity is subject to the organization maintaining their system in accordance with INTERTEK SAI Global requirements for systems certification. Validity may be confirmed via email at certificate.validation@intertek.com or by scanning the code to the right with a smartphone. The certificate remains the property of INTERTEK SAI Global, to whom it must be returned upon request.

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Certificate of Registration

质量管理体系 - ISO 9001:2015

兹证明:

埃维柯阀门(安徽)有限公司 91340500730038975J 中国 安徽省 马鞍山市 和县 乌江工业园区 邮编: 238251 AVK Valves (Anhui) Co., Ltd. Wujiang Industrial Park He County Ma'anshan Anhui 238251 China

持有证书: FM 84039

并运行符合 ISO 9001:2015 要求的质量管理体系,认证范围如下:

用于供水、污水处理、消防和供气的阀门及其附件的制造。 The manufacture of valves and accessories for water supply, sewage treatment, firefighting and gas supply.

Chris Cheung, 亚太地区 合规风险主管

BSI代表:

首次发证日期: 2004-07-09 最新发证日期: 2021-09-14



...making excellence a habit."

Page: 1 of 1

生效日期: 2021-10-08

有效期至: 2024-10-07

此证书以电子版本方式发放,所有权属BSI并受合同条款的约束。 可以 <u>在线</u> 查询电子证书的有效性 打印的证书可以通过网站 http://www.bsi-global.com/ClientDirectory或者致电 +86 10 8507 3000 查询。本证书信息亦可在国家认证认可监督管理委员会官方网站 <u>(www.ence.gov.en)</u> 上查询。 关于证书范围及 ISO 9001:2015 要求的适用性的进一步说明请咨询BSI。 我证组织必须定期接受监督审核并经审核合格此证书方继续有效。 此证书只在提供完整正本时才有效。 信息查询及联系方式, BSI, Kitemark Court, Davy Avenue, Knowhill, Mikon Keynes MK5 8PP. 电话: +44 345 080 9000 BSI保证美国有限公司,注册地英国,注册号码7805321,地址: 389 Chiswick High Road, London W4 4AL, UK 英标管理体系认证 (北京) 有限公司 北京市建国门外大街甲24号东海中心2008室 邮编: 100004 电话: +86 10 85073000 BSI保证公司成员。

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SAI Global hereby grants:

AVK Australia Holding Pty Ltd

ABN 11 081 236 777

559A Grand Junction Road, Wingfield, SA 5013, Australia

StandardsMark Licence

Manufactured to:

AS 4795.1-2011 - Butterfly valves for waterworks purposes - Wafer and lugged

"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.

Originally Certified : 20 September 2023

Current Certification : 20 September 2023

Licence No: SMK26887

Issued : 20 September 2023 Expires : 19 September 2028

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") 650 Lorimer Street, , Port Melbourne VIC 3207, GPO Box 5420 Sydney IN 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, for the list of product models.



SCHEDULE TO STANDARDSMARK LICENCE

SAI Global hereby grants:

AVK Australia Holding Pty Ltd

559A Grand Junction Road, Wingfield, SA 5013, Australia

StandardsMark Licence

Manufactured to:

AS 4795.1-2011 - Butterfly valves for waterworks purposes - Wafer and lugged

Model identification of the goods on which the STANDARDSMARK may be used:

Model identification	Pressure Classification (PN)	Nominal Size	Product Dscription	Brand Name	Model Name	Inlet / Outlet Designation	Date Endorsed
\$76/70-050	16	DN050	Concentric butterfly valve, loose liner, wafer type	AVK	S76	DN050	20 Sep 2023
\$76/70-065	16	DN065	Concentric butterfly valve, loose liner, wafer type	AVK	S76	DN065	20 Sep 2023
S76/70-080	16	DN080	Concentric butterfly valve, loose liner, wafer type	AVK	S76	DN080	20 Sep 2023
S76/70-100	16	DN 100	Concentric butterfly valve, loose liner, wafer type	AVK	S76	DN100	20 Sep 2023
\$76/70-125	16	DN 125	Concentric butterfly valve, loose liner, wafer type	AVK	\$76	DN 125	20 Sep 2023
S76/70-150	16	DN 150	Concentric butterfly valve, loose liner, wafer type	AVK	S76	DN 150	20 Sep 2023
S76/70-200	16	DN200	Concentric butterfly valve, loose liner, wafer type	AVK	S76	DN200	20 Sep 2023
\$76/70-250	16	DN250	Concentric butterfly valve, loose liner, wafer type	AVK	S76	DN250	20 Sep 2023
S76/70-300	16	DN300	Concentric butterfly valve, loose liner, wafer type	AVK	S76	DN300	20 Sep 2023
\$76/70-350	16	DN350	Concentric butterfly valve, loose liner, wafer type	AVK	S76	DN350	20 Sep 2023
S76/70-400	16	DN400	Concentric butterfly valve, loose liner, wafer type	AVK	S76	DN400	20 Sep 2023
\$76/71-050	16	DN050	Concentric butterfly valve, loose liner, Lugged type	AVK	S76	DN050	20 Sep 2023
\$76/71-065	16	DN065	Concentric butterfly valve, loose liner, Lugged type	AVK	\$76	DN065	20 Sep 2023
S76/71-080	16	DN080	Concentric butterfly valve, loose liner, Lugged type	AVK	\$76	DN080	20 Sep 2023
\$76/71-100	16	DN 100	Concentric butterfly valve, loose liner, Lugged type	AVK	\$76	DN100	20 Sep 2023

Licence No: SMK26887

Issued Date: 20 September 2023

This schedule supersedes all previously issued schedules



* For details of manufacture, refer to the licensee

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SCHEDULE TO STANDARDSMARK LICENCE

Model identification	Pressure Classification (PN)	Nominal Size	Product Dscription	Brand Name	Model Name	Inlet / Outlet Designation	Date Endorsed
\$76/71-125	16	DN125	Concentric butterfly valve, loose liner, Lugged type	AVK	\$76	DN125	20 Sep 2023
\$76/71-150	16	DN 150	Concentric butterfly valve, loose liner, Lugged type	AVK	S76	DN 150	20 Sep 2023
\$76/71-200	16	DN200	Concentric butterfly valve, loose liner, Lugged type	AVK	S76	DN200	20 Sep 2023
\$76/71-250	16	DN250	Concentric butterfly valve, loose liner, Lugged type	AVK	\$76	DN250	20 Sep 2023
\$76/71-300	16	DN300	Concentric butterfly valve, loose liner, Lugged type	AVK	\$76	DN300	20 Sep 2023

End of Record

Licence No: SMK26887

Issued Date: 20 September 2023

This schedule supersedes all previously issued schedules



* 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 underlicence by SAI Global Certification Services Pty Limited (ACN 108 716 669) ("SAI Global") 650 Lorimer Street, Port Melbourne VIC 3207, 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 the Schedule 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

Website: https://www.avkcivil.com.au/en-au



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Wurundjeri Country Level 8, Suite 8.02 401 Docklands Drive Docklands VIC 3008

Sydney Office

Gadigal Country Level 6 75 Elizabeth Street Sydney NSW 2000 GPO Box 915 Sydney NSW 2001

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www.wsaa.asn.au