



# AVFI Pty Ltd

## PRODUCT APPRAISAL REPORT 1509 Issue 2

AVFI Resilient Seated Gate Valves

**AS/NZS 2638.2:2011 Gate valves for waterworks purposes –  
Resilient seated**

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## Document History

The following information indicates the changes made to this document.

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## Peer Reviewers

Name/Title	Organisation	Date
Product Appraisal Technical Advisory Group	WSAA	21 June 2016
WSAA Expert Panel	WSAA	21 June 2016
Peter Pittard, WSAA Consultant	WSAA	21 February 2017
Carl Radford, Product Appraisal Manager	WSAA	22 February 2017
Peter Pittard, WSAA Consultant	WSAA	24 October 2023
Carl Radford, Product Appraisal Manager	WSAA	26 October 2023

## 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

AVFI Pty Ltd was established in 1995 as a provider of valves for municipal, industrial and mining applications in Australia. In September 2023 AVFI became a member company of Derwent Industries Pty Ltd.

AVFI Resilient Seated Gate Valves are manufactured by Fowry Tech (Shandong) Co Ltd in China. Fowry Tech is a member of the Huihua Valve Group.

This appraisal is for a range of AVFI DN 80 to DN 600 PN 16 flanged resilient seated gate valves manufactured in conformance with AS/NZS 2638.2:2011 *Gate valves for waterworks purposes, Part 2: Resilient-seated*.

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

Both AVFI and Fowry Tech hold ISO 9001:2015 Quality Management System Licences.

The resilient seated gate valves have ISO Type 5 StandardsMark product certification to AS/NZS 2638.2:2011 *Gate valves for waterworks purposes, Part 2: Resilient-seated*.

This Appraisal has determined that AVFI resilient seated gate valves as detailed in this report, meet the requirements of WSA PS 260 *Gate Valves, Resilient Seated for Pressure Applications – Drinking Water, Non-Drinking Water Supply and Sewerage* 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 the AVFI range of resilient seated gate valves, as detailed in this report, for use in water supply and sewerage pressure pipelines, provided they are installed in accordance with WSAA Codes and the manufacturers requirements, where specified.

## 2 THE APPLICANT

The Applicant is AVFI Pty Ltd.

### 2.1 The Supplier

AVFI Pty Ltd was established in 1995 as a provider of valves for municipal, industrial and mining applications in Australia. In October 2014 AVFI Pty Ltd became a member of Pon Holdings BV. In September 2023 Derwent Industries Pty Ltd acquired AVFI Pty Ltd.

AVFI has warehouses in every Australian State and Territory.

### 2.2 The Manufacturer

Fowry Tech (Shandong) Co. Ltd. is located in Binzhou City, Shandong Province, Peoples Republic of China and was established in 2011 by Huihua Valve Industry Co. Huihua has a history of valve manufacturing dating back to 1984, offering a range of valves including butterfly, check, gate and globe for the export market, under the brand name of Hiwa.

The Huihua group operates three manufacturing facilities located in Shandong China.

The Fowry Tech factory incorporates a foundry operation as well as coating, machining, assembly and testing facilities to enable complete manufacturing capabilities for the AVFI gate valves. It employs more than 150 employees.

Fowry Tech manufactures its own ductile iron components and sources other components locally from ISO 9001 certified suppliers. Fowry Tech has its own rubber moulding facilities under cover of a StandardsMark ISO Type 5 product certification.

The components are inspected and tested for compliance to AVFI drawings and specifications in accordance with their quality procedures.

Material certification is documented and receipted with each shipment received from the suppliers.

### 3 THE PRODUCT

This appraisal is for a range of AVFI DN 80 to DN 600 PN 16 flanged resilient seated gate valves with either clockwise or anti-clockwise closure options, manufactured in conformance with AS/NZS 2638.2:2011 *Gate valves for waterworks purposes, Part 2: Resilient-seated*.

Operation is by key or hand wheel

Flanges comply with Figure B5 (PN16) of AS/NZS 4087 *Metallic flanges for waterworks purposes*.

Polymeric coatings conform to AS/NZS 4158 Thermal bonded polymeric coating on valves and fittings for water industry purposes.

**TABLE 1**  
**AVFI RESILIENT SEATED GATE VALVE RANGE**

DN	Flange-Flange
80	✓
100	✓
150	✓
200	✓
225	✓
250	✓
300	✓
350	✓
375	✓
400	✓
450	✓
500	✓
600	✓

### 4 SCOPE OF THE APPRAISAL

The scope of the appraisal covers PN 16 resilient seated gate valves in sizes DN 80 to DN 600 with flanged ends.

### 5 APPRAISAL CRITERIA

#### 5.1 Quality Assurance Requirements

The WSAA Product Appraisal Technical Advisory Group accepts resilient seated gate valves manufactured in compliance with AS/NZS 2638.2:2011 *Gate valves for waterworks purposes, Part 2: Resilient-seate* 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

AVFI's resilient seated gate valves have been appraised for compliance with AS/NZS 2638.2:2011.

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 260 Gate Valves, Resilient Seated for Pressure Applications – Drinking Water, 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

AVFI has submitted the following quality certificates:

- ISO 9001:2015 Certificate of Registration No. QEC 29843 issued to AVFI Pty Ltd by Intertek SAI-Global.
- ISO 9001:2015 Certificate of Registration No. CN13/10523 issued to Fowry Tech (Shandong) Co Ltd by SGS.
- AS/NZS 2638.2:2011 StandardsMark ISO Type 5 Product Certification Licence No. SMK 25915 issued to AVFI Pty Ltd by SAI-Global.
- AS 1646:2007 StandardsMark ISO Type 5 Product Certification Licence No. SMK 40082 issued to Fowry Tech (Shandong) Co 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.

### 6.2 Compliance with Performance Requirements

#### 6.2.1 Component materials

The AVFI valve component materials are detailed in Table 2. AVFI has provided copies of recent material test reports to demonstrate compliance to AS/NZS 2638.2 requirements.

**TABLE 2 AVFI RSV COMPONENT MATERIAL LIST**

Item	Material	Standard	Grade
Body	Ductile Iron	AS 1831	GJS/500-7
Bonnet	Ductile Iron	AS 1831	GJS/500-7
Spindle Seal Retainer	Copper Alloy	AS1565	C95210
Gate Core	Ductile Iron	AS 1831	GJS/500-7
Gate Encapsulation	Synthetic Rubber	AS 1646	EPDM
Gate Nut	Copper Alloy	AS 1565	C95210
Spindle	Stainless Steel	ASTM A276	431
Spindle Cap	Ductile Iron	AS 1831	GJS/500-7
Body/Bonnet Bolts Fasteners	Stainless Steel	ASTM A276	316
Gaskets	Synthetic Rubber	AS 1646	EPDM
Sealing O-rings	Synthetic Rubber	AS 1646	65-75 IRHD NBR

### 6.2.2 Flanges

Flange comply with AS/NZS 4087 Figure B5 PN16.

Recommended installation is in accordance with the requirements of AS/NZS 4087.

### 6.2.3 Polymeric coatings

AS/NZS 2638.2 requires thermal bonded polymeric coatings to comply with AS/NZS 4158 - *Thermal-bonded polymeric coatings on valves and fittings for water industry purposes*.

AVFI resilient seated valves are coated at the Fowry Tech facility using Akzo Nobel Resicoat R4 fusion bonded epoxy, coloured blue. Resicoat is covered by an ISO Type 5 product certification licence. A copy is held on file by WSAA.

A test report, undertaken by Prove Standards and Engineering (NATA Accreditation No. 18640), has been submitted to demonstrate compliance with the process verification requirements of AS/NZS 4158.

A Quality Plan has also been submitted to demonstrate that application and testing is in accordance with the requirements of AS/NZS 4158.

SAI-Global also audits application procedures and testing in conjunction with regular StandardsMark AS/NZS 2638.2 certification audits.

### 6.2.4 Type tests

AVFI has submitted copies of Type Test reports for each size gate valve to demonstrate compliance with the performance requirements of AS/NZS 2638.2.

National Centre for Supervision & Inspection of Drainage Irrigation and Water Saving Equipment Products Quality (CNAS Accreditation No. L0606) carried out the testing.

### 6.2.5 Contact with drinking water

AS/NZS 2638.2 requires compliance with AS/NZS 4020 Testing of products for use in contact with drinking water.

AVFI has submitted Report No 285317 dated 19<sup>th</sup> June 2020 carried out by AWQC (NATA Accreditation No. 1115) on a DN 80 resilient seated valve to demonstrate compliance with AS/NZS 4020:2018

## 7 FITTING INSTRUCTIONS, TRAINING AND INSTALLATION

Resilient seated gate valves are commonly installed throughout water supply networks and have become the standard isolation valve of the urban water industry worldwide. Installation, operation and maintenance are well understood by experienced installers and operators.

## 8 PRODUCT MARKING

AVFI resilient seated gate valves are marked in accordance with AS/NZS 2638.2 as follows:

- Manufacturers name: AVFI
- Nominal size: DNXX
- Year of manufacture: XXXX
- Pressure rating: PN 16
- Standard No: AS/NZS 2638.2
- Product Certification Mark: StandardsMark

## 9 PACKAGING AND TRANSPORTATION

Each valve is placed in a sealed plastic bag. Rubber covers are fitted to all flanges and valve bodies for protection. The valves are packed into wooden boxes or crates using cardboard to separate each valve.



Valves are packed with the gate in the fully open position.



**FIGURE 1 VALVE PACKAGING**

## 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 AVFI's warranty is included in their terms and conditions of sale.

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

AVFI resilient seated gate valves are approved by many Australian water agencies.

## 12 DISCUSSION

Table 3 below highlights the recommendations of use for the AVFI gate valve range.

**TABLE 3 GATE VALVES LIMITATION OF USE**

Product Detail	Recommendation
Suitable Applications	Pipelines used in water reticulation, sewage, waste water and irrigation
Limitations	Maximum service temperature 40°C.
	Gate valves should not be used for throttling or adjusting flow.

## 13 OUTCOMES OF EXPERT PANEL PRODUCT REVIEW

No issues were raised.

## 14 FUTURE WORKS

No future works have been identified.

## 15 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).

### **15.1 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.

### **15.2 Limits on Reliance on Information and Recommendations**

#### **15.2.1 Disclaimer of liability**

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#### **15.2.3 Need for independent assessment**

The information and any recommendation contained (expressly or by implication) in this Report are provided in good faith (and subject to the limitations noted in this Report). However, you should treat the information as indicative only. You should not rely on that

information or any such recommendation except to the extent that you reach an agreement to the contrary with the Publisher(s).

This Report does not contain all information that a person might require for the purposes of assessing any product discussed or appraised within it (Product). The product appraisal criteria used in preparing this Report may not address all relevant aspects of the Product.

Recipients should seek independent evidence of any matter which is material to their decisions in connection with an assessment of the Product and consult their own advisers for any technical information required. Any decision to use the Product should take into account the reliability of that independent evidence obtained by the Recipient regarding the Product.

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.

WSAA has not evaluated the extent of the product liability and professional indemnity insurance that the provider of the product maintains. Recipients should ensure that they evaluate the allocation of liability for product defects and any professional advice obtained in relation to the product or its specification including the requirements for product liability and professional indemnity insurance.

### **15.3 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.

### **15.4 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



### RSGV-AS

AS/NZS 2638.2:2011 & WATERMARK APPROVED  
RESILIENT SEATED GATE VALVE  
DN50 - DN600\*

#### TECHNICAL DATA

Size Range:	DN50 - DN600*
Pressure Class:	PN16
Face to Face:	AS/NZS 2638.2:2011
Flange Drilling:	AS4087 B5
Pressure Testing:	AS/NZS 2638.2:2011
Coating:	AS4020 Approved
Operator:	Keycap (standard)
ISO Mount:	Standard for DN350 & above

#### APPROVED TO

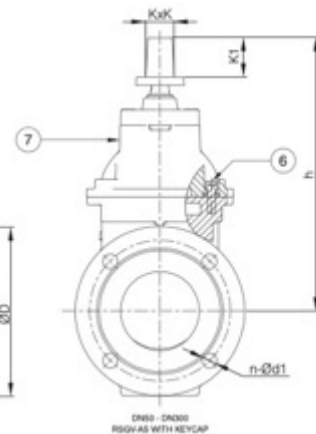
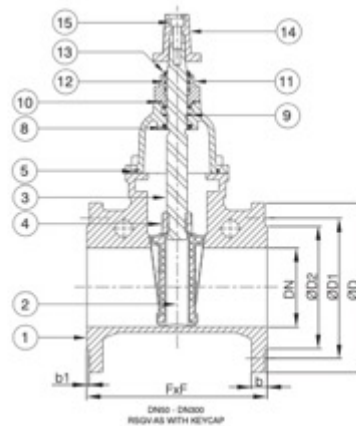


#### OPTIONS

- Clockwise (CC) or Anti-Clockwise (ACC) close.
- Handwheel, gear box or electric actuator operation available.
- Spindle extensions.

#### MATERIAL SPECIFICATION & PARTS LIST

NO.	DESCRIPTION	MATERIAL
1	Body	Ductile Iron 500-7 (AS1831)
2	Wedge	EPDM (AS1646) Encapsulated Ductile Iron 500-7 (AS1831)
3	Stem	Stainless Steel 431
4	Stem Nut	Alu. Bronze (C96210)
5	Bonnet Gasket	EPDM (AS1646)
6	Bolt	Stainless Steel 316
7	Bonnet	Ductile Iron 500-7 (AS1831)
8	V Sealing	NBR (AS1646)
9	Washer	Nylon
10	O-Ring	NBR (AS1646)
11	Bonnet Gland	Alu. Bronze (C96210)
12	O-Ring	NBR (AS1646)
13	Dust Guard	NBR (AS1646)
14	Cap	Ductile Iron 500-7 (AS1831)
15	Bolt	Stainless Steel 316
16	Top Flange	Ductile Iron 500-7 (AS1831)



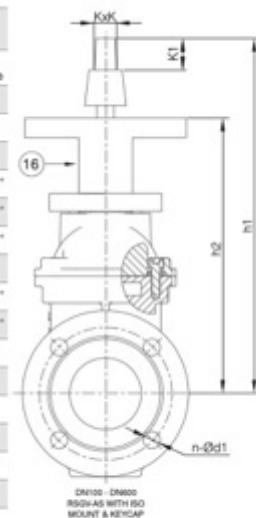
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#### DIMENSIONS (MM)

RSGV-AS DN50 - DN600				KEY CAP		FLANGE DRILLING			AS4087 CL16	AS2129 T/E	OPERATIONAL DATA						
DN	FxF	b	b1	h	h1	h2	K1	KxK	ØD	ØD1	ØD2	n-Ød1	n-Ød1	Closure Turns	Torque (Nm)	Weight (Kg)	Top Flange
50	178	18	3	300	—	—	—	—	150	114	90	4-18	4-18	12	35	11	—
65	190	18	3	310	—	—	—	—	165	127	103	4-18	4-18	12	40	12	—
80	203	18	3	318	—	—	50	35x35	185	146	122	4-18	4-18	19	75	18	—
100	229	20	3	350	—	265**	50	35x35	215	178	154	4-18	8-18	23	100	24	F10**
150	267	23	3	440	—	347**	50	35x35	280	235	211	8-18	8-22	32	150	44	F10**
200	292	23	3	550	—	434**	57	35x35	335	292	268	8-18	8-22	35	200	69	F14**
225	305	24	3	590	—	—	57	35x35	370	324	300	8-18	12-22	43	200	105	—
250	330	24	3	622	—	525**	57	35x35	405	356	328	8-22	12-22	44	250	111	F14**
300	356	30	4	706	—	606**	57	35x35	455	406	378	12-22	12-26	53	300	150	F14**
350	381	33	4	—	962	807	57	35x35	525	470	438	12-26	12-26	35	450	210	F16
375	381	33	4	—	985	912	57	35x35	550	495	463	12-26	12-26	39	500	281	F16
400	406	33	4	—	1068	912	57	35x35	580	521	489	12-26	12-26	39	550	306	F16
450	432	33	4	—	1135	984	57	35x35	640	584	552	12-26	16-26	41	600	363	F16
500	457	35	4	—	1254	1060	57	35x35	705	641	609	16-26	16-26	47	660	442	F16
600	508	42	5	—	1410	1232	57	35x35	825	756	720	16-30	16-33	50	800	607	F16

(\*DN50-DN65 not covered by AS/NZS 2638.2:2011)

(\*\* ISO mount optional extra for sizes DN100-300)



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Australian Capital Territory, Queensland, New South Wales, Northern Territory, South Australia, Tasmania, Victoria, Western Australia, & New Zealand

## APPENDIX B - QUALITY CERTIFICATIONS

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

**TABLE B1  
AVFI PTY LTD– MANAGEMENT SYSTEMS**

54 Enterprise Drive Bundoora Vic	
Quality Systems Standard	ISO 9001:2015
Certification Licence No.	QEC 29843
Certifying Agency	Intertek SAI Global
First Date of Certification	17 May 2012
Current Date of Certification	31 March 2023
Expiry Date of Certification	26 May 2026

**TABLE B2  
FOWRY TECH (SHANDONG) CO LTD – MANAGEMENT SYSTEMS**

Binzhou City Shandong China	
Quality Systems Standard	ISO 9001:2015
Certification Licence No.	CN13/10523
Certifying Agency	SGS
First Date of Certification	26 December 2012
Current Date of Certification	27 December 2021
Expiry Date of Certification	26 December 2024

**TABLE B3  
AVFI PTY LTD – PRODUCT CERTIFICATION**

54 Enterprise Drive Bundoora Vic	
Product Standard/Spec.	AS/NZS 2638.2:2011
Certificate No.	SMK 25915
Issuing Certification Body	SAI Global
First Date of Certification	20 April 2015
Current Date of Certification	3 June 2020
Expiry Date of Certification	19 April 2025

**TABLE B4**  
**FOWRY TECH (SHANDONG) CO LTD – PRODUCT CERTIFICATION**

Binzhou City Shandong China	
Product Standard/Spec.	AS 1646:2007
Certificate No.	SMK 40082
Issuing Certification Body	SAI Global
First Date of Certification	10 December 2015
Current Date of Certification	12 April 2021
Expiry Date of Certification	2 December 2025

# CERTIFICATE OF REGISTRATION

This is to certify that:

**AVFI Pty Ltd**

ABN 83 159 299 242

54 Enterprise Drive Bundoora VIC 3083 AUSTRALIA

operates a

**QUALITY MANAGEMENT SYSTEM**

which complies with the requirements of

**ISO 9001:2015**

for the following scope

The import, assembly and supply or repair of valves for water and waste water industries.

**Certificate Number:**

QEC29843

**Originally Certified:**

17 May 2012

**Current Certification:**

31 March 2023

**Issue Date:**

6 April 2023

**Expiry Date:**

26 May 2026



ISO 9001



[WWW.JAS-ANZ.ORG/REGISTER](http://WWW.JAS-ANZ.ORG/REGISTER)



**Calin Moldovean**

President, Business Assurance

SAI Global Certification Services Pty. Ltd.

650 Lorimer Street

Port Melbourne Victoria 3207

Australia

**Registered by:**

SAI Global Certification Services Pty Ltd (ACN 108 716 669) 650 Lorimer Street Port Melbourne VIC 3207 Australia with SAI Global Pty Limited 650 Lorimer Street Port Melbourne VIC 3207 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/>





Certificate CN13/10523

The management system of

# FOWRY Tech. (Shandong) Co., Ltd.

Business Registration Address: North End of Gongye 2 Road, Sangluoshu Industry Zone, Huimin County, Binzhou City, Shandong Province, P.R. China  
Business Operation Address: North End of Gongye 2 Road, Sangluoshu Industry Zone, Huimin County, Binzhou City, Shandong Province, P.R. China

Unified Social Credit Code 913716215716668341

has been assessed and certified as meeting the requirements of

## ISO 9001:2015

For the following activities

**Design and manufacture of general valves, castings, pipe fittings, joints, relative rubber products and seals**

This certificate is valid from 27 December 2021 until 26 December 2024 and remains valid subject to satisfactory surveillance audits. Recertification audit due a minimum of 60 days before the expiration date. Issue 6. Certified since 26 December 2012

Authorised by



SGS United Kingdom Ltd  
Rostmore Business Park, Ellesmere Port, Cheshire, CH65 3EN, UK  
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# STANDARDSMARK LICENCE

**SAI Global hereby grants:**

**AVFI Pty Ltd**

ABN 83 159 299 242

54 Enterprise Drive, Bundoora, VIC 3083, Australia

## StandardsMark Licence

Manufactured to:

**AS/NZS 2638.2:2011 - Gate valves for waterworks purposes - Resilient seated**

"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: SMK25915**

**Issued : 3 June 2020**  
**Expires : 19 April 2025**

**Originally Certified : 20 April 2015**  
**Current Certification : 3 June 2020**

Heather Mahon  
General Manager Technical Services  
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.



# SCHEDULE TO STANDARDSMARK LICENCE

SAI Global hereby grants:

## AVFI Pty Ltd

54 Enterprise Drive, Bundoora, VIC 3083, Australia

StandardsMark Licence

Manufactured to:

**AS/NZS 2638.2:2011 - Gate valves for waterworks purposes - Resilient seated**

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

Model Identification	Model Name	Brand Name	Product Description	Product Type	Nominal Size (DN)	Valve Class (Allowable Operating Pressure)	Maximum Operating Temperature (°C)	Material Designation	Valve Coating Material	Valve Operating Method	Valve Direction of Closure	End Connection Designation	Date Entered
MT11M	R52V-AS-100	AVFI	DN100 Resilient Seated Gate Valve	Gate Valve	100	16	80	Ductile Iron	Fusion Bonded Epoxy	Keycap or Handwheel	Clockwise or Anti-Clockwise	Flanged AS4087 d 16	5 May 2015
MT11M	R52V-AS-150	AVFI	DN150 Resilient Seated Gate Valve	Gate Valve	150	16	80	Ductile Iron	Fusion Bonded Epoxy	Keycap or Handwheel	Clockwise or Anti-Clockwise	Flanged AS4087 d 16	5 May 2015
MT11M	R52V-AS-200	AVFI	DN200 Resilient Seated Gate Valve	Gate Valve	200	16	80	Ductile Iron	Fusion Bonded Epoxy	Keycap or Handwheel	Clockwise or Anti-Clockwise	Flanged AS4087 d 16	5 May 2015
MT11M	R52V-AS-225	AVFI	DN225 Resilient Seated Gate Valve	Gate Valve	225	16	80	Ductile Iron	Fusion Bonded Epoxy	Keycap or Handwheel	Clockwise or Anti-Clockwise	Flanged AS4087 d 16	5 May 2015
MT11M	R52V-AS-250	AVFI	DN250 Resilient Seated Gate Valve	Gate Valve	250	16	80	Ductile Iron	Fusion Bonded Epoxy	Keycap or Handwheel	Clockwise or Anti-Clockwise	Flanged AS4087 d 16	5 May 2015
MT11M	R52V-AS-300	AVFI	DN300 Resilient Seated Gate Valve	Gate Valve	300	16	80	Ductile Iron	Fusion Bonded Epoxy	Keycap or Handwheel	Clockwise or Anti-Clockwise	Flanged AS4087 d 16	5 May 2015
MT11M	R52V-AS-350	AVFI	DN350 Resilient Seated Gate Valve	Gate Valve	350	16	80	Ductile Iron	Fusion Bonded Epoxy	Keycap or Handwheel	Clockwise or Anti-Clockwise	Flanged AS4087 d 16	5 May 2015
MT11M	R52V-AS-375	AVFI	DN375 Resilient Seated Gate Valve	Gate Valve	375	16	80	Ductile Iron	Fusion Bonded Epoxy	Keycap or Handwheel	Clockwise or Anti-Clockwise	Flanged AS4087 d 16	5 May 2015
MT11M	R52V-AS-400	AVFI	DN400 Resilient Seated Gate Valve	Gate Valve	400	16	80	Ductile Iron	Fusion Bonded Epoxy	Keycap or Handwheel	Clockwise or Anti-Clockwise	Flanged AS4087 d 16	5 May 2015
MT11M	R52V-AS-450	AVFI	DN450 Resilient Seated Gate Valve	Gate Valve	450	16	80	Ductile Iron	Fusion Bonded Epoxy	Keycap or Handwheel	Clockwise or Anti-Clockwise	Flanged AS4087 d 16	5 May 2015
MT11M	R52V-AS-500	AVFI	DN500 Resilient Seated Gate Valve	Gate Valve	500	16	80	Ductile Iron	Fusion Bonded Epoxy	Keycap or Handwheel	Clockwise or Anti-Clockwise	Flanged AS4087 d 16	5 May 2015
MT11M	R52V-AS-600	AVFI	DN600 Resilient Seated Gate Valve	Gate Valve	600	16	80	Ductile Iron	Fusion Bonded Epoxy	Keycap or Handwheel	Clockwise or Anti-Clockwise	Flanged AS4087 d 16	20 Oct 2015
MT11M	R52V-AS-80	AVFI	DN80 Resilient Seated Gate Valve	Gate Valve	80	16	80	Ductile Iron	Fusion Bonded Epoxy	Keycap or Handwheel	Clockwise or Anti-Clockwise	Flanged AS4087 d 16	5 May 2015

End of Record

Licence No: SMK25915

Issued Date: 3 June 2020

This schedule supersedes all previously issued schedules



\* For details of manufacture, refer to the licensee

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# STANDARDSMARK LICENCE

SAI Global hereby grants:

## Fowry Tech.(Shandong) Co., Ltd

North end of Gongye 2 Rd., Sangluoshu Industry Zone, Huimin County, Binzhou City, Shandong China

### StandardsMark Licence

Manufactured to:

**AS 1646-2007 - Elastomeric seals 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: SMK40082**

**Issued :** 30 April 2021

**Expires :** 2 December 2025

**Originally Certified :** 10 December 2015

**Current Certification :** 12 April 2021

Frank Camasta  
Global Head of Technical Services  
SAI Global Assurance



\* For details of manufacture, refer to the licensee

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## APPENDIX C - SUPPLIER CONTACTS

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