



# WSAA PRODUCT APPRAISAL CERTIFICATE

## REHAU Pty Ltd – REHAU AWASHAFT PP Sewerage Maintenance Assemblies and Associated Fittings

The scope of this appraisal applies to REHAU AWASHAFT Polypropylene (PP) DN 1000 Maintenance Holes, DN 800 and DN 600 Maintenance Chambers, DN 400 Maintenance Shafts, DN 300 Terminal Maintenance Shafts and associated Polypropylene fittings and couplings as detailed in the attached Schedule B.

<b>Product Category</b>	Polypropylene (PP) Sewerage Maintenance Structures
<b>PA Number</b>	PA 1508 Issue 7
<b>Supplier</b>	REHAU Pty Ltd
<b>Brand</b>	REHAU AWASHAFT
<b>Standards</b>	<p>WSA 137:2022 <i>Industry standard for Unplasticized polyvinyl chloride (PVC-U), polypropylene (PP) and Polyethylene (PE) sewerage maintenance shafts, maintenance chambers and maintenance holes</i></p> <p>AS/NZS 5065:2005 <i>Polyethylene and polypropylene pipes and fittings for drainage and sewerage applications.</i></p> <p>AS/NZS 4327:1995 <i>Metal-banded flexible couplings for low-pressure applications</i></p>
<b>WSAA Product Specification</b>	<p>WSA PS-340 Maintenance Holes (MH) – Polypropylene (PP) for Non-Pressure Applications – Sewerage</p> <p>WSA PS-337 <i>Maintenance Chambers (MC) – Polypropylene (PP) for Non-Pressure Applications – Sewerage</i></p> <p>WSA PS-341 <i>Maintenance Shafts (MS) – Polypropylene (PP) for Non-Pressure Applications – Sewerage</i></p> <p>WSA PS 240 <i>Polypropylene (PP), Plain and Structured Wall, Pipes and Fittings for Non-pressure Applications – Sewerage</i></p> <p>WSA PS 235 <i>Couplings, Metal-Banded Flexible, for Non-Pressure Applications – Sewerage</i></p>
<b>Issue date</b>	18 May 2023
<b>Expiry date</b>	17 May 2028
<b>Recommendations</b>	It is recommended that WSAA members, subject to any specific requirements of the member, accept or authorise the REHAU AWASHAFT maintenance structures and associated fittings, as detailed in this report, for use in sewerage applications, provided installation and acceptance testing complies with applicable WSAA Codes and the manufacturer's requirements.

**Disclaimer**

The disclaimer on Page 3 explains a number of very important limits on your ability to rely on the information in this Product Appraisal Certificate (Certificate) and the assessment criteria used to underlay it. Please read it carefully and take it into account when considering the content in this Certificate.

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## **1. Disclaimer**

This Product Appraisal Certificate (Certificate) is issued by WSAA on the understanding that:

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

To maintain the recommendations of this Certificate any such changes shall be detailed and notified to the Product Appraisal Manager for consideration and review of the Certificate including the product appraisal criteria underlying it 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. Certificates will be reviewed and reissued at regular intervals not exceeding five (5) years.

WSAA reserves the right to withdraw this Certificate at any time in its sole and absolute discretion for any reason.

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

Any enquiries regarding this Certificate should be directed to the Product Appraisal Manager Phone: 03 8605 7601 email [carl.radford@wsaa.asn.au](mailto:carl.radford@wsaa.asn.au).

### **1.1. Issue of Certificate**

This Certificate has been published and/or prepared by WSAA and nominated Project Manager and peer group of technical specialists (the Publishers).

The Certificate and the underlying product appraisal criteria have been prepared for use within Australia only by technical specialists that have expertise in the function of products such as those appraised in the Certificate (the Recipients).

By accepting this Certificate, the Recipient acknowledges and represents to the Publisher(s) and each person involved in the preparation of the Certificate and product appraisal criteria underlying it that the Recipient has understood and accepted the terms of this Disclaimer.

### **1.2. Limits on Reliance on Information and Recommendations**

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#### **1.2.3. Need for independent assessment**

The information and any recommendation contained (expressly or by implication) in this Certificate are provided in good faith (and subject to the limitations noted in this Certificate). 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).

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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.

### **1.3. No Updating**

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### **1.4. 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 Certificate, or the accuracy, completeness or reasonableness of any recommendation in this Certificate

## QUALITY CERTIFICATIONS

Copies of the following quality certificates are available from WSAA.

### SCHEDULE A1 REHAU AG + CO – QUALITY MANAGEMENT SYSTEMS

Rheniumhaus Otto-Hahn-Str. 2 D-95111 Rehau, Germany	
Quality Systems Standard	ISO 90001:2015
Certification Licence No.	01 104 0101700
Certifying Agency	TÜV Rheinland
Current Date of Certification	29 June 2021
Expiry Date of Certification	28 June 2024

### SCHEDULE A2 REHAU PTY LTD – PRODUCT CERTIFICATION

Suite 1.02 Level 1 Quad 1 8 Parkview Drive Sydney Olympic Park NSW	
Product Standard/Spec.	WSA 137:2019
Certificate No.	AMI 74663
Issuing Certification Body	ApprovalMark International
First Date of Certification	30 November 2017
Current Date of Certification	7 October 2022
Expiry Date of Certification	30 November 2027

### SCHEDULE A3 REHAU PTY LTD – PRODUCT CERTIFICATION

Suite 1.02 Level 1 Quad 1 8 Parkview Drive Sydney Olympic Park NSW	
Product Standard/Spec.	AS/NZS 5065:2005
Certificate No.	AMI 71503
Issuing Certification Body	ApprovalMark International
First Date of Certification	25 January 2018
Current Date of Certification	25 January 2023
Expiry Date of Certification	25 January 2028

**SCHEDULE A4 REHAU PTY LTD – PRODUCT CERTIFICATION**

Suite 1.02 Level 1 Quad 1 8 Parkview Drive Sydney Olympic Park NSW	
Product Standard/Spec.	AS/NZS 4327:1995
Certificate No.	AMI 74764
Issuing Certification Body	ApprovalMark International
First Date of Certification	23 March 2018
Current Date of Certification	23 March 2023
Expiry Date of Certification	23 March 2026



PRODUCT LITERATURE



DN 1000 Maintenance Hole (MH)



DN 800 Maintenance Chamber (MC)



DN 600 Maintenance Chamber (MC)



DN 400 Maintenance Shaft (MS)







DN 300 or DN 225 Terminal Maintenance Shaft (TMS)









**FIGURE 1 AWASHAFT MAINTENANCE ASSEMBLIES**



**TABLE 1**  
**FITTINGS FOR USE WITH AWASHAFT MAINTENANCE STRUCTURES**

Fitting	DN	Picture
<b>AWADUCT PP FITTINGS SN10</b>		
Eccentric Reducers	375-300, 300-225, 150-100	
Slip Couplers	100, 150, 225, 300, 375	
Double Socket Couplers	100, 150, 225, 300, 375	
Ball Joints	150	
Double Socket <del>Vario</del> Connectors	225, 300	
Socket Plugs	100, 150, 225, 300, 375	
<b>METAL BANDED GRADE 316 STAINLESS STEEL FLEXIBLE COUPLINGS</b>		
Flex-Connect	Clamping OD range 110-145, 123-162, 160-200, 200-260	
<b>AWADOCK PP FITTINGS</b>		
Connection of sewer pipe to DN 1000 or DN 800 AWASHAFT	150	



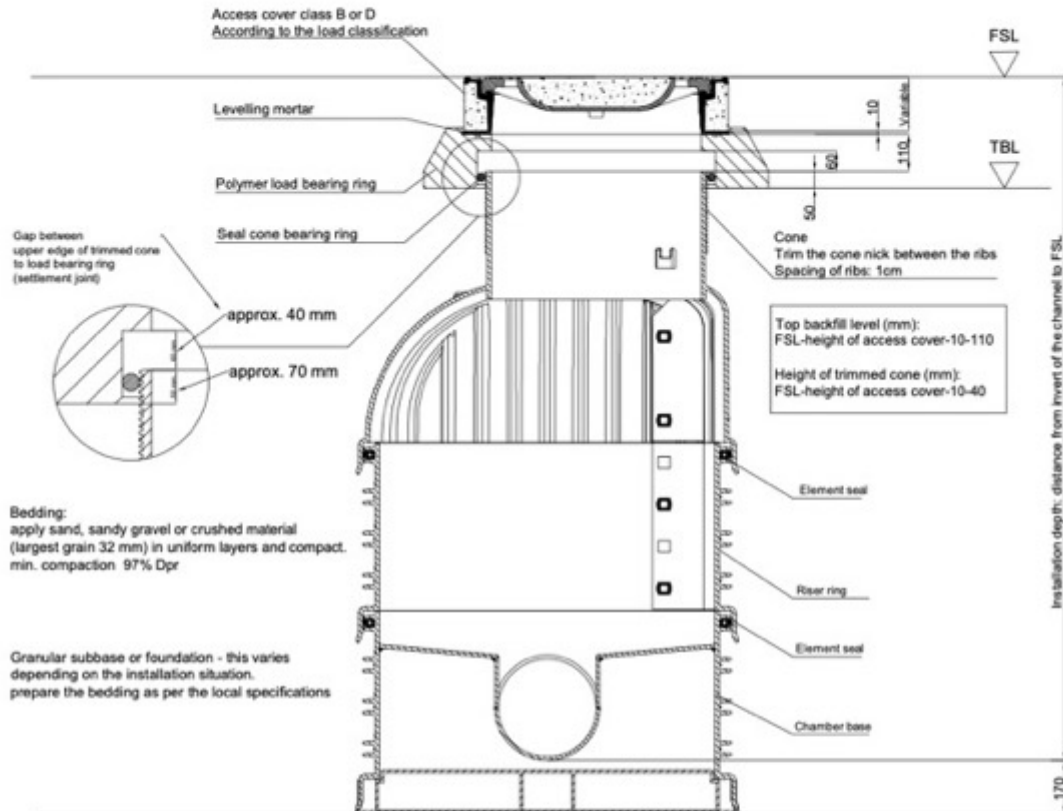
Field of application	Gravity sewer systems				
General Designation	Maintenance Hole	Maintenance Hole/Chamber	Maintenance Chamber	Maintenance Shaft	Terminal Maintenance Shaft
Description	AWASHAFT PP 1000	AWASHAFT PP 800	AWASHAFT PP 600	AWASHAFT PP 400	AWASHAFT TMS
<b>Figures</b>					
<b>General properties</b>	DN 1000	DN 800	DN 600	DN 400	225
Nominal diameter of base (DN)	DN 1000	DN 800	DN 600	DN 400	225
Man-entry	yes	yes/no	no	no	no
Material	PP free of fillers, free of foaming additives and recycled materials	PP free of fillers, free of foaming additives and recycled materials	PP free of fillers, free of foaming additives and recycled materials	Basic PP high modulus fiber reducer, PVC-U according to AS/NZS 1290	PVC-U fiber according to AS/NZS 1290
Maximum installation Depth (Recommended*)	8 m (5 m)	5 m (3 m)	5 m (3 m)	5 m (3 m)	5 m (3 m)
Maximum traffic load	Up to SUW 60 (F 900) / Class D	Up to SUW 60 (F 900) / Class D	Up to SUW 60 (F 900) / Class D	Up to D 400 / Class D	Up to D400/Class D
Buoyancy safety: maximum groundwater level above pipe bottom	5 m	5 m	5 m	3 m	3 m
Pipe connections (plug-in/weldable)	Rubber ring / welded connection	Rubber ring joint / welded joint	Rubber ring joint / welded joint	Rubber ring joint	Rubber ring joint
Tightness of the attached parts (pipe connector)	0.8 bar (2.4 bar)	1 bar (2.4 bar)	0.5 bar (2.4 bar)	0.5 bar (2.5 bar)	0.5 bar (2.5 bar)
Minimum installation depth (Depending on the type of cover)	1.2 m	1.1 m	1 m	0.9	0.9
<b>Standards/approvals</b>	WASA approval	+	+	+	+
Relevant standards fulfilled	DN/EN 13598-2, DN/EN 476	WASA 137, WASA 02, EN 13598-2, DN 476	WASA 137, WASA 02, EN 13598-2, DN 476	WASA 137, WASA 02, EN 13598-2, EN 476	AS/NZS 3065, WASA 02
Other test results/expert reports	  				
<b>Material properties</b>	Chemical resistance	pH 1 – 13	pH 1 – 13	pH 1 – 13	pH 1 – 13
Temperature resistance	Long term	60 °C	60 °C	40 °C	60 °C
	Short term	90 °C	90 °C	60 °C	90 °C
Recyclable	yes	yes	yes	yes	yes
<b>Advantages/Customer benefits</b>	Resistant against ground water infiltration	Ideal for rehabilitation of the existing concrete manholes	Cost effective due to the size	Ideal as a building inspection chamber for land drainage	-
	Solid and load bearing under high traffic loads (up to SUW 60 /Class D)	Solid and load bearing under high traffic loads (up to SUW 60 /Class D)	Long service life. Corrosion resistant PP extends the service life	Fast and easy to install via variable single components	-
	Buoyancy protection even at high groundwater levels	Buoyancy safety even at high groundwater levels	Safe and inspection-friendly with the colour orange	Can be installed without expensive equipment	-
	100 years design life	Long service life and leak-proof	Easy site handling. Lower labour and equipment costs due to light weight and quick installation	Problem-free insertion of inspection testing and cleaning equipment	-
	Premium injection moulding quality made from polypropylene	Easy to inspect and safe		Long service life and leak proof	-
	Flexible modular chamber system with integrated ladders	Cost effective due to the size			-
	Easy inspection chamber concept for every application	Can be perfectly combined with DN 1000			-

\* For installations with greater depths contact RD/VU sales office.





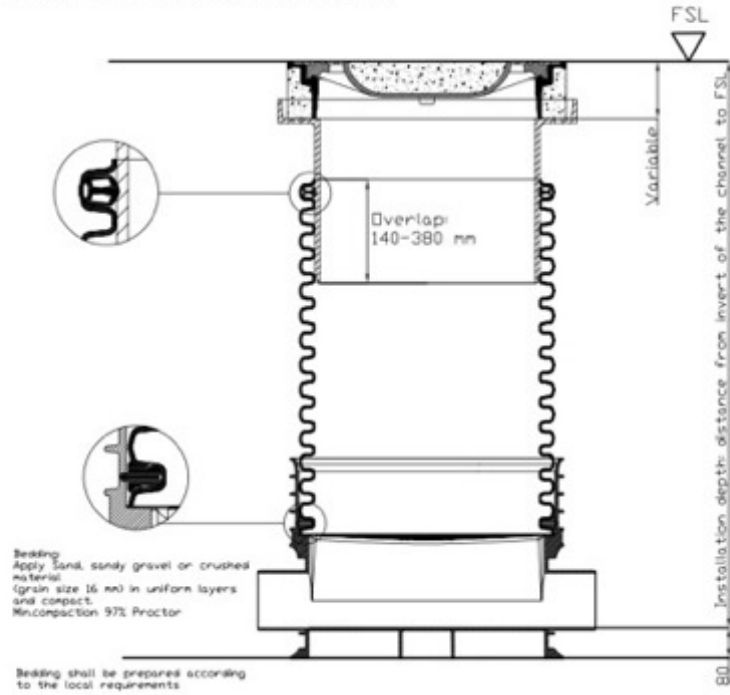
Installation sketch for AWASHAFT 800 and 1000 with Class B and Class D access covers.



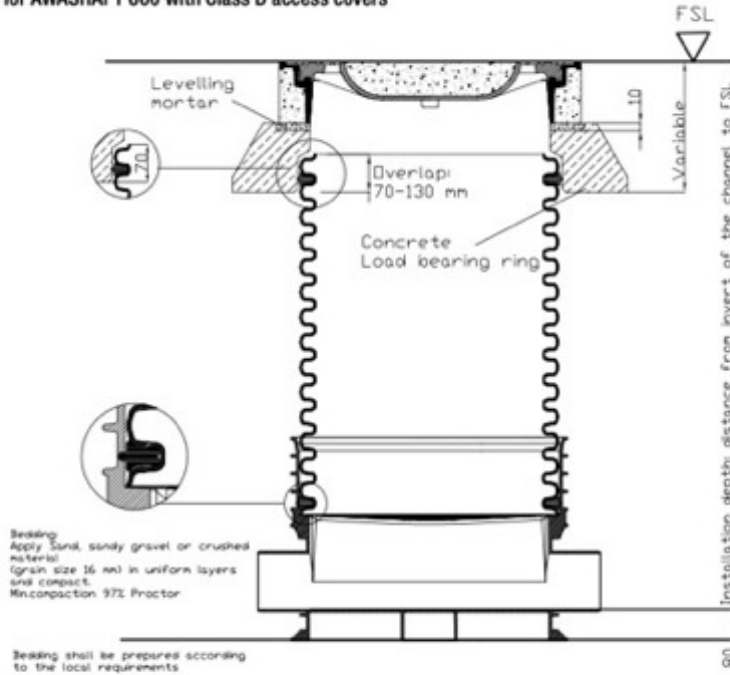
\* AWASHAFT 800 as a Maintenance Chamber shall be installed as a non man entry maintenance structure. Some utilities require a restriction in clear opening to 300 mm which can be achieved by installing a suitable access cover.



Installation sketch for AWASHAFT 600 with Class B access covers.



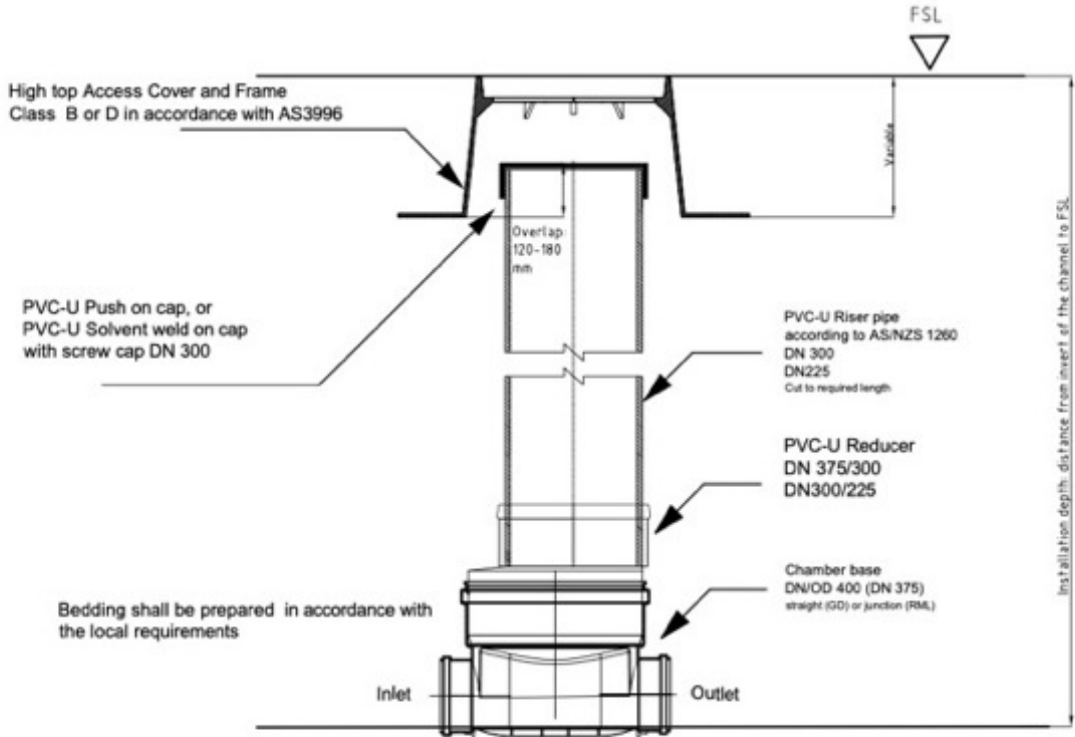
Installation sketch for AWASHAFT 600 with Class D access covers



\* AWASHAFT 600 Maintenance Chamber shall be installed as a non man entry maintenance structure. Some utilities require a restriction in clear opening to 300 mm which can be achieved by installing a suitable access cover.



Installation sketch for AWASHAFT 400



## SUPPLIER CONTACTS

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