



Holman Industries

PRODUCT APPRAISAL REPORT 1301 Issue 10

Fabricated and Moulded PVC-U Fittings for DWV

AS/NZS 1260:2017 PVC-U pipes and fittings for drain, waste and vent application

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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

Holman Industries is a family business, based in Perth WA, that was originally established in 1966. The company is currently focused on providing products for irrigation, watering, plumbing, civil, garden lifestyle and garden lighting.

This Appraisal was previously published under the name of Fabfit. Holman acquired the Fabfit business in January 2017 and has rebranded their product range as Holman.

This Appraisal is for a range of PVC-U fabricated and injection moulded fittings in sizes from DN 100 to DN 375 with solvent cement joints (SCJ) or Rubber Ring Joints (RRJ), manufactured in compliance with AS/NZS 1260:2017 *PVC-U pipes and fittings for drain, waste and vent application*.

This Issue 10 is to include additional moulded fittings as denoted in red font in Tables 3 and 4.

Issue 9 was a replacement for the previous version of the appraisal and also included additional fittings. Clarification of long radius bend specifications was also addressed (see Section 3.3).

The fittings are intended for applications in either above or below ground installations that operate under gravity flow.

The fabricated range of DWV fittings are manufactured at the Fabfit facility in Stapylton Queensland and the injection moulded fittings are sourced from either the Holman Perth manufacturing facility or a supplier in China.

AS/NZS 1260 nominates a minimum wall thickness for injection moulded fittings and advises that they are suitable for use with pipes up to SN16. However, some water agencies have reported incidents involving mechanical failure of DN 100 and DN 150 injection moulded fittings when used in property service connection assemblies due to ground movement, subsidence and settlement related issues. In response to Water Agency requirements WSA PS 230 has been amended to include an option for Heavy Duty fittings with increased minimum wall thicknesses. See Sections 3 and 11 for further details.

A range of Heavy Duty SCJ and RRJ fittings with increased wall thickness is included within the scope of this Appraisal.

See Section 4 for complete details of the fittings range covered by this Appraisal.

Holman has a Quality Management System licence to ISO 9001.

The fittings are covered by ISO Type 5 ApprovalMark product certifications to AS/NZS 1260.

Holman also has ApprovalMark certifications for Best Environmental Practice (BEP).

The Holman PVC-U DWV fittings described within this appraisal meet the requirements of WSA PS 230 *Polyvinylchloride, Unplasticised (PVC-U) Pipes and Fittings for Non-Pressure Applications – Sewerage and Drainage* and are therefore deemed 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 Holman range of fabricated and injection moulded PVC-U solvent cement and elastomeric seal joint fittings, as detailed in this report, for use in drainage and non-pressure wastewater applications, provided they are installed in accordance with AS/NZS 2032 *Installation of PVC-U pipe systems*, WSAA Codes and the manufacturer's requirements.

2 THE APPLICANT

The applicant is Holman Industries.

2.1 The Manufacturer and Supplier

Holman Industries is a family business, based in Perth WA that was originally established in 1966. The company is currently focused on providing products for irrigation, watering, plumbing, civil, garden lifestyle and garden lighting.

Fabfit is a leading Australian manufacturer of PVC and PE fabricated fittings with over 20 years' experience in supplying products and services to the water, sewerage, drainage, plumbing, industrial, irrigation, communications, electrical and power applications.

The Fabfit manufacturing operation is located in Stapylton, Queensland. Holman Industries acquired the Fabfit business in January 2017 and the Fabfit range of products is now Holman branded.

Injection moulded fittings are either manufactured at the Holman manufacturing facility located in Perth or sub-sourced from a manufacturer located in China. The products manufactured by the Chinese based supplier are included within the Fabfit ISO Type 5 licence. Holman has requested that the identity of the China based supplier remains "commercial-in confidence"

3 THE PRODUCT

This Appraisal is for a range of PVC-U fabricated and moulded fittings in sizes from DN 100 to DN 375 with Solvent Cement Joints (SCJ) or Rubber Ring Joints (RRJ), manufactured in compliance with AS/NZS 1260:2017 *PVC-U pipes and fittings for drain, waste and vent application*.

AS/NZS 1260 nominates a minimum wall thickness for injection moulded fittings and advises that they are suitable for use with pipe up to SN16. However, some water agencies have reported incidents involving mechanical failure of DN 100 and DN 150 injection moulded fittings when used in property service connection assemblies due to ground movement, subsidence and settlement related issues. Fittings manufactured with AS/NZS 1260 minimum wall thicknesses are known to have stiffness ratings between 16 and 60 depending on the size and configuration of the fittings. Clearly the mechanical strength of a fitting is not directly related to its stiffness rating.

In response to Water Agency requirements WSA PS 230 has been amended to include an option for Heavy Duty fittings with increased minimum wall thicknesses.

The range of Holman Heavy Duty SCJ and RRJ fittings is included within the Scope of this Appraisal.

Details of minimum wall thicknesses, complying with WSA PS 230, are provided in Table 1.

TABLE 1 MINIMUM WALL THICKNESSES FOR MOULDED FITTINGS

DN	RRJ				SCJ			
	Standard		Heavy Duty		Standard		Heavy Duty	
	AS/NZS 1260	Holman	WSA PS 230	Holman	AS/NZS 1260	Holman	WSA PS 230	Holman
100	3.0	3.0	4	4	3.0	3.0	5	6
150	4.0	4.0	5	5	4.0	4.0	6	6
225	6.1	-	-	-	6.1	6.1	-	-
300	7.7	-	-	-	7.7	7.7	-	-

3.1 PVC-U moulded fittings

Holman PVC-U DWV moulded fittings are manufactured entirely by an injection moulding process.

3.2 PVC-U fabricated fittings

Fabricated PVC-U fittings are manufactured using cut sections of solid wall PVC-U pipe, except for taper sections which are formed by wrapping a heated flat section of PVC in a taper mould. The PVC parts are joined to form the fitting configuration using hot air gun welding. The joints are first tack welded then fully welded using PVC filler rods. Welded joints are reinforced with a wrapping of resin impregnated glass-fibre. The resin is required to physically adhere to the PVC. On bends, junctions and tapers the glass-fibre reinforcement is continuous and extends the full length and circumference of the fittings to either the socket root or 35 to 50 mm onto a plain spigot or threaded end.

The solid wall PVC-U pipe used to fabricate the fittings is supplied by Australian manufacturers of PVC-U DWV pipe product certified to AS/NZS 1260 and with a current WSAA Product Appraisal.

3.3 Long radius bends

Holman offers a range of long radius bends, manufactured by bending straight lengths of PVC-U pipes, as follows:

- DN 150 SCJ F&F 1000mm radius with angles from 2.5⁰ to 90⁰.
- DN 150 RRJ M&F 635mm, 1000mm and 3000mm radius with angles from 2.5⁰ to 90⁰.

The above range of DN 150 long radius bends are included in their ApprovalMark product schedule.

AS/NZS 1260 does not include configuration details for fabricated fittings and specifies that the spigot and socket dimensions and wall thicknesses shall be the same as moulded fittings.

In 2003, WSAA published WSA 115 *Industry standard for post formed variable bend PVC fittings for non-pressure pipelines*. This Standard specifies requirements for post-formed variable PVC bends that are intended for below-ground use in conjunction with PVC and PE maintenance shafts where the pipeline is operating under gravity flow. The Standard is limited to plain wall pipes and fittings. It was reviewed and re-issued in 2019.

WSA 115 and WS-02 Gravity Sewerage Code of Australia specifies DN 150 long radius bends with a maximum angle of 45⁰ and a minimum radius of 635mm for horizontal bends and 3000mm for vertical bends. WSA 115 also nominates minimum wall thicknesses for long radius bends based on the discontinued Class SEH pipe wall thickness. (Classification for pipes was amended from minimum wall thickness to minimum pipe stiffness in 1999).

In accordance with the above, Holman long radius bends with angles above 45⁰ have not been included in the Scope of this Appraisal and it should also be noted that while the wall thickness of Holman long radius bends comply with AS/NZS 1260 they do not comply with the current minimum wall thickness requirements of WSA 115. See Table 2 for details.

WSAA has requested PL-021 Standards Australia committee to review WSA 115 (including specified minimum wall thicknesses) and incorporate relevant content into the next revision of AS/NZS 1260 so that WSA 115 can be withdrawn.

TABLE 2 HOLMAN LONG RADIUS BENDS

DN	Minimum Wall Thickness		
	AS/NZS 1260	WSA 115	Holman
150	4.0	5.0	4.6

4 SCOPE OF THE APPRAISAL







The scope of the appraisal is for PVC-U moulded and fabricated fittings for drainage, waste and vent applications in sizes DN 100 to DN 375, are detailed in Tables 3 and 4 and included in the Type 5 Product Certification ApprovalMark product schedules attached in Appendix B.








TABLE 3
HOLMAN STANDARD PVC-U DWV FITTINGS

Product Type	Ends	Size, DN		Joint Type
		Moulded	Fabricated	
Bends (Elbows) 5 ⁰ , 15 ⁰ , 22 ⁰ , 30 ⁰ , 45 ⁰ , 60 ⁰ , 88 ⁰	F&F, M&F	100,150, 225, 300	100,150, 225, 300, 375	SCJ
Drop Bends	F&F, M&F		100, 150, 225, 225x150	SCJ
Junctions 45 ⁰	F&F, M&F	100x100,150x100, 150x150, 225x100, 225x150, 225x225, 300x100, 300x150	300x225, 300x300, 375x100, 375x150, 375x225, 375x300, 375x375	SCJ
Junctions 88 ⁰ / 90 ⁰	F&F, M&F	100x100, 150x100, 150x150, 225x100, 225x150, 225x225	150x100x90 ⁰ , 225x100, 225x150, 225x225, 300x100, 300x150 300x225, 300x300, 375x100, 375x150, 375x225, 375x300, 375x375	SCJ
End Caps	Push on	100, 150, 225, 300	375	SCJ
Screwed Caps	Threaded	100, 150, 225, 300		SCJ
Couplings	Threaded	100, 150, 225, 300		SCJ
Level Invert Tapers	M&F	150-100, 225-100, 225-150, 300-225,	300-100, 300-150, 375-100, 375-150, 375-225, 375-300	SCJ
Tapping Saddles 45 ⁰ - 90 ⁰ (Boss Connectors)		150x100, 225x100, 225x150, 300x225	100, 150, 225, 300, 375	SCJ
Inspection Openings	F&F, M&F	100,150	225x100, 225x150, 225x225, 300x100, 300x150, 300x225, 300x300, 375x100, 375x150, 375x225, 375x300.	SCJ
Long Radius Bends, 1000mm radius, 2.5 ⁰ - 45 ⁰	F&F		150	SCJ
Slab Repair Couplings	In-pipe to Male	100, 150	225, 300, 375	SCJ
Slip Couplings		100, 150	150, 225, 300, 375	SCJ
Elbows 43 ⁰ , 45 ⁰	M&F	100, 150	100, 150, 225, 300, 375	RRJ
Elbows, 5 ⁰ - 90 ⁰	F&F, M&F		100, 150, 225, 300, 375	RRJ
Junctions, 45 ⁰ , 90 ⁰	F&F, M&F	100x100, 150x150	100x100, 150x100, 150x150, 225x100, 225x150, 225x225, 300x100, 300x150, 300x225, 300x300, 375x100, 375x150, 375x225, 375x300	RRJ
Deep Sewer Junctions, 90 ⁰	F&F		100x100, 150x100, 150x150, 225x100, 225x150, 300x100, 300x150	RRJ

Inspection Openings	F&F	100	100, 150, 225, 300, 375	RRJ
Repair Slip Couplings		100, 150	225, 300, 375	RRJ
Expansion Joints	F&F		100,150, 225. 300, 375	RRJ, SWJ
Manhole Couplings - Sanded	F&F, M&F		100, 150, 225, 300, 375	RRJ
Manhole Couplings - Sanded Spigot	M&M		100, 150, 225, 300, 375	RRJ
Manhole Couplings - Unsanded	M&F	100, 150, 225,300	100, 150, 225, 300, 375	RRJ
Long Radius Bends, 635mm, 1000mm and 3000mm radius, 2.5° - 45°	M&F		150	RRJ
Level Invert Tapers	M&F		150-100, 225-100, 225-150, 300-100, 300-150, 300-225	RRJ
Drop Junctions	M&M		100, 150, 225, 300	RRJ
Vertical Backdrop Assembly			100, 150	RRJ
Junctions, Type C 45°, 90°	F&F		100, 150	RRJ
Straight Insert Fitting	M&F	100, 150, 225, 300		RRJ
Spigot Adaptor	M-threaded	150		RRJ

TABLE 4 HOLMAN HEAVY DUTY PVC DWV FITTINGS

Product Type	Ends	Size, DN	Joint Type	
		Moulded		
Bends (Elbows) 45°, 60°, 88°	F&F	100, 150	SCJ	
Bends (Elbows) 43°	M&F	100, 150	SCJ	
Level Invert Tapers	M&F	150-100	SCJ	
Inspection Openings	F - threaded	100, 150	SCJ	
Junctions 45°	F - threaded	100x100, 150x100, 150x150	SCJ	
Junctions 88°	F - threaded	100x100, 150x150	SCJ	

Bends (Elbows) 45°	F&F	100, 150	RRJ	
Bends (Elbows) 43°	M&F	100, 150	RRJ	
Junction 45°	F&F	150x100, 150x150	RRJ	
Junction 45°	M&F	150x100, 150x150	RRJ	
Junction 88°	F&F	150x150	RRJ	
Inspection Openings	F&F	100, 150	RRJ	
Repair Slip Coupling	F&F	100, 150	RRJ	

5 APPRAISAL CRITERIA

5.1 Quality Assurance Requirements

The WSAA Product Appraisal Network accepts PVC fabricated and moulded fittings manufactured in compliance with AS/NZS 1260 *PVC-U pipes and fittings for drain, waste and vent application* and duly verified by means of an ISO Type 5 product certification scheme undertaken by a Conformity Assessment Body (CAB) or by means of an equivalent 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

The Holman PVC-U fabricated and moulded fittings have been appraised for compliance with AS/NZS 1260:2017 *PVC-U pipes and fittings for drain, waste and vent application* and WSA PS-230.

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 relevant to this application:

WSA PS-230 *Polyvinylchloride, Unplasticised (PVC-U) Pipes and Fittings for Non-Pressure Applications – Sewerage and Drainage*.

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

Holman has submitted the following quality certificates:

- ISO 9001:2015 Certificate of Registration No. QMS 21388 issued to Fabfit T/A Holman Industries by ApprovalMark International.
- AS/NZS 1260:2017 ApprovalMark ISO Type 5 Product Certification Licence No. AMI 21246 issued to Fabfit T/A Holman Industries by ApprovalMark International.
- AS/NZS 1260:2017 ApprovalMark ISO Type 5 Product Certification Licence No. AMI 74772 issued to Holman Industries (Perth) by ApprovalMark International.
- AS/NZS 1260:2017 Best Environmental Practice Certificate No. BEP-AMI 78006 issued to Fabfit T/A Holman Industries by ApprovalMark International.
- AS/NZS 1260:2017 Best Environmental Practice Certificate No. BEP-AMI 78003 issued to Holman Industries (Perth) by ApprovalMark International.

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

A copy of the ISO 9001:2015 licence has also been supplied for the Chinese based sub-supplier.

6.2 Compliance with Performance Requirements

6.2.1 Material

Holman has undertaken to source PVC-U DWV pipe for fabrication of their fittings only from suppliers that have their pipe covered by an ISO Type 5 Product Certification to AS/NZ 1260 and a current WSAA Appraisal.

6.2.2 Elastomeric seals

EPDM elastomeric seals for the Rubber Ring Joints (RRJ) are sourced from either Gulf Rubber or Hultec. Both suppliers have ISO Type 5 product certification to AS1646:2007 *Elastomeric seals for waterworks purposes*

Copies of these QA certifications are held on file by WSAA.

6.2.3 Solvent cement

Solvent cements and priming fluids are not supplied by Holman as it is the responsibility of the installer. However solvent cement and priming fluid for use with tapered socketed fittings should be Type N or Type G complying with AS/NZS 3879:2011

6.2.4 Performance tests

Holman provided copies of test reports for previous issues of this appraisal and has also provided additional reports for this appraisal to demonstrate compliance with the requirements of AS/NZS 1260.

The following material and dimensional related tests have been completed:

- High temperature stress relief test
- Softening temperature (Vicat Test)
- Socket dimensions on moulded fittings
- Wall thickness
- Stiffness

The following performance tests have also been completed for the elastomeric seals joints:

- Hydrostatic pressure test
- Liquid infiltration test
- Contact width and pressure
- Concentricity and parallelism
- Witness marks
- Effective sealing length
- Elastomeric joint design

7 FITTING INSTRUCTIONS, TRAINING AND INSTALLATION

PVC-U DWV pipe has been a commonly used product in the urban water industry for many years and pipe layer training is readily available. Installation, repair and maintenance procedures for PVC pipes are specified in WSA 02 Sewerage Code of Australia and additional information is available on the WSAA web site at www.wsaa.asn.au including:

- Product Specifications
- Product and Material information and guidance
- Water industry product standards
- Technical notes
- Product appraisal reports

The following standards and guideline also provide information:

- AS/NZS 2032:2006 *Installation of PVC pipe systems*
- AS/NZS 2566.1:1998 *Buried flexible pipelines Part 1: Structural Design*
- AS/NZS 2566.2:2002 *Buried flexible pipelines Part 2: Installation*
- PIPA publication POP 102 *Solvent Cement Jointing of PVC Pipe* is available from <https://www.pipa.com.au/index.php/technical/pop-guidelines/>

There is a requirement for installers and repairers to be trained in the installation/repair of PVC pipe systems with specialised products. Holman does not provide any specific training for pipelayers, however there are a number of Registered Training Organisations (RTO's) who conduct suitable training courses based on AS/NZS 2032 and AS/NZS 2566.2.

The Plastics Industry Pipe Association of Australia Limited (PIPA) has nominated the Flexitec course that covers PVC pipe handling and installation and is delivered nationally either directly by LeHunt and Associates or in conjunction with PARTEC (QLD, NT, NSW), Holmesglen TAFE (VIC) and Regency TAFE (SA). The Civil Contractor's Federation have their own state-based RTO's and some of them conduct suitable PVC pipe training courses as well.

8 PRODUCT MARKING

Holman PVC-U DWV moulded fittings are legibly and durably marked and comply with the requirements of AS/NZS 1260 as follows:

- Manufacturer's name: Holman
- Nominal size: e.g. 100mm
- Pipe Material: UPVC
- The angle of the fitting: e.g. 45°
- The letters 'DWV'

- Date of manufacture:
- The number of this Standard: AS/NZS 1260
- The Product Certification mark:

Heavy Duty fittings that comply with the specified minimum wall thicknesses in WSA PS 230 are marked HEAVY DUTY.

PVC-U fittings are also marked 'BEP PVC' on the product packaging.

Figure 1 shows typical markings for Holman PVC-U DWV moulded and fabricated fittings.



FIGURE 1 TYPICAL MARKINGS

9 PACKAGING AND TRANSPORTATION

Holman moulded and fabricated fittings are stored and transported in individual cartons or in cartons on pallets. The pallets are then covered in a shrink wrap and marked with fragile tape. This method of transporting the fittings ensures no scoring to the body of the fitting or damage to any sealing surfaces.

All fittings are stored under cover in dry conditions with all moulded fittings kept in their 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 Holman's warranty is included in their terms and conditions of sale.

11 WATER AGENCY EXPERIENCE WITH THE PRODUCT OR FIELD TESTING REPORT

AS/NZS 1260 covers plain and structured wall pipes and fittings for drain, waste and vent applications in either above or below ground installations that operate under gravity flow.

PVC gravity sewer systems have been in use in Australia since the early 1970s and are the predominant option for collection sewers for sizes up DN 375. Water industry consensus is that PVC-U gravity systems have performed satisfactorily and that correctly installed PVC-U systems have better resistance to tree root penetration, whether elastomeric sealing ring

jointed or solvent cement jointed. However, some mechanical failures of DN 100 and DN 150 moulded fittings have been experienced when utilised in sewer property service connection assemblies.

WSAA has included an option within WSA PS 230 to allow the specification of DN 100 and DN 150 heavy duty fittings with increased wall thicknesses for property service applications where additional mechanical resistance may be required to resist ground movements, subsidence or settlement related issues. Refer to WSA PS 230 for details.

PVC-U systems should not be used where the ground is or may be contaminated by chemicals, especially organic solvents.

Holman (Fabfit) PVC-U fabricated and moulded fittings have been approved for use by a number of Water Agencies for many years for wastewater applications.

12 FUTURE WORKS

No future works have been identified.

13 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, Phone: 03 8605 7601 email carl.radford@wsaa.asn.au.

13.1 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).

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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 indemnify 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.

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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.

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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

Holman has three relevant product catalogues relating to the range of fittings included in this appraisal. The front pages are included in this Appendix. Complete copies of the catalogues may be downloaded from the following link: <https://www.holmanindustries.com.au/product-catalogue/>

HOLMAN
PLUMBING

2023 CATALOGUE

DWV // STORMWATER // PVC PRESSURE
PVC VALVES // S-P PVC TRAPS //
POLY FITTINGS RANGE //
SPECIAL FABRICATED FITTINGS

**PVC & POLY
FITTINGS RANGE**
www.holmanindustries.com.au

For the #SMARTPLUMBER

AUSTRALIAN
FAMILY OWNED BUSINESS

HOLMAN

PLUMBING

2023 HOLCIVIL CATALOGUE

DWV HEAVY DUTY FITTINGS 100 - 150MM
Designed and made for Australia's tough conditions. Reducing the risk of breakage from ground movement.



DWV HEAVY DUTY

www.holmanindustries.com.au

For the #SMARTPLUMBER



HOLMAN

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DWV RUBBER RING JOINT CATALOGUE

DWV DRAINAGE SN8 & SN10 RUBBER RING
JOINT FITTINGS FOR NON-PRESSURE
SEWER APPLICATIONS



CIVIL RANGE

www.holmanindustries.com.au

For the #SMARTPLUMBER



APPENDIX B - QUALITY CERTIFICATIONS

Copies of the following Quality Certifications are available from WSAA

TABLE B1 FABFIT T/A HOLMAN INDUSTRIES – MANAGEMENT SYSTEMS

298A Jacob Well Road Stapylton Qld, 4207	
Quality Systems Standard	ISO 9001:2015
Certification licence no.	QMS 21388
Certifying agency	ApprovalMark International
Current date of certification	15 May 2022
Expiry date of certification	15 May 2025

TABLE B2 FABFIT T/A HOLMAN INDUSTRIES – PRODUCT CERTIFICATION

298A Jacob Well Road Stapylton Qld, 4207	
Product Standard/Spec.	AS/NZS 1260:2017
Certificate No.	AMI 21246
Issuing certification body	ApprovalMark International
First date of certification	22 July 2019
Current date of certification	30 November 2021
Expiry date of certification	22 July 2025

TABLE B3 HOLMAN INDUSTRIES – PRODUCT CERTIFICATION

11 Walters Drive Osborne Park WA	
Product Standard/Spec.	AS/NZS 1260:2017
Certificate No.	AMI 74772
Issuing certification body	ApprovalMark International
First date of certification	23 July 2020
Current date of certification	13 July 2023
Expiry date of certification	23 July 2026

TABLE B4 FABFIT T/A HOLMAN INDUSTRIES – BEP CERTIFICATION

298A Jacob Well Road Stapylton Qld, 4207	
Product Standard/Spec.	AS/NZS 1260:2017
Certificate No.	BEP-AMI 78006
Issuing certification body	ApprovalMark International
First date of certification	10 March 2017
Current date of certification	18 April 2023
Expiry date of certification	10 March 2025

TABLE B5 HOLMAN INDUSTRIES – BEP CERTIFICATION

11 Walters Drive Osborne Park WA	
Product Standard/Spec.	AS/NZS 1260:2017
Certificate No.	BEP-AMI 78003
Issuing certification body	ApprovalMark International
First date of certification	10 March 2017
Current date of certification	18 April 2023
Expiry date of certification	10 March 2025



CERTIFICATE OF REGISTRATION



ApprovalMark International hereby grants:

FABFIT
T/A HOLMAN INDUSTRIES
298A Stapylton-Jacobs Well Road
Stapylton, QLD 4207
AUSTRALIA

Evaluated to:
ISO 9001: 2015 - QUALITY MANAGEMENT SYSTEMS

THIS COVERS THE FOLLOWING SCOPE:
For the fabrication of PVC plumbing and electrical fittings

Certificate No. QMS 21388

Issued: 15th May 2022
Expires: 15th May 2025

John PRASAD
Director



Registered by: ApprovalMark International Pty Ltd (ABN 69 143 259 974) Unit 20, 33 Holbeche Road, Arndell Park NSW 2148 Australia. The assessment was carried with appropriate skill and assessment by ApprovalMark International Pty Ltd; however it will only accept its responsibility for proven negligence. The certificate remains the property of ApprovalMark International Pty Ltd.

ApprovalMark

ISO TYPE 5

CERTIFICATE OF CONFORMITY



ApprovalMark International hereby grants:

FABFIT

T/A Holman Industries
298A Stapylton – Jacobs Well Road
Stapylton, QLD 4207
AUSTRALIA

ISO Type 5 Certificate of Conformity

Evaluated to:

AS/NZS 1260:2017 PVC-U pipes and fittings for drain, waste and vent application

The ISO Type 5 License shall comply with all the terms and conditions as stipulated by the governance of the operating rules of the ISO Type 5 Scheme and shall comply with the standard requirements at all times including when the standard is amended. The ISO Type 5 License only covers the product which is identified in the attached product schedule.

Certificate No. AMI 21246

Issued: 30th November 2021

Original Issue: 22nd July 2019

Expires: 22nd July 2025

John PRASAD

Director

ApprovalMark International Pty Ltd
20/33 Holbeche Road, Arndell Park 2148, Australia
www.approvalmark.com



Registered by: ApprovalMark International Pty Ltd (ABN 69 143 259 974) Unit 20, 33 Holbeche Road, Arndell Park NSW 2148 Australia. The assessment was carried with appropriate skill and assessment by ApprovalMark International Pty Ltd, however it will only accept its responsibility for proven negligence. The certificate remains the property of ApprovalMark International Pty Ltd.

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Product Schedule

FABFIT

T/A Holman Industries
298A Stapylton – Jacobs Well Road
Stapylton, QLD 4207
AUSTRALIA

ISO Type 5 Certificate of Conformity

Evaluated to:

AS/NZS 1260:2017 PVC-U pipes and fittings for drain, waste and vent application

Model Id	Model Name	Brand Name	Product Description	Endorsement Date
HolFab.001	DWV Fittings, SN8, SN10	Fabfit/ Holman	100MM BSP MALE IRON TO DWV SOCKET (F), SWJ	30 th November 2021
HolFab.002	DWV Fittings, SN6, SN8	Fabfit/ Holman	DISCONNECTOR BOUNDARY TRAP DWV, STD, NO-LOSS, ZERO-LOSS, SN6, SN8, 100MM - 375MM (F), SWJ	1 st June 2021
HolFab.003	DWV Fittings, SN6, SN8	Fabfit/ Holman	BOLTED TRAP SCREW, DWV, SN6, SN8, 100MM - 375MM (F), SWJ	22 nd June 2020
HolFab.004	DWV Fittings, SN6, SN8, SN10	Fabfit/ Holman	DWV, SN6, SN8, SN10 - COUPLING SLIP, RR, SWJ, 100MM - 375MM, MOULDED/ FABRICATED	22 nd June 2020
HolFab.005	DWV Fittings, SN8	Fabfit/ Holman	DWV, SN8, 1000MM LONG RADIUS BENDS, 150MM, 2.5 DEGREE - 90 DEGREE BENDS, SWJ	22 nd June 2020
HolFab.006	DWV Fittings, SN6, SN8, SN10	Fabfit/ Holman	DWV, SN6, SN8, SN10, ELBOWS, 100MM - 375MM, 2.5 DEGREE - 90 DEGREE, F&F, MOULDED/ FABRICATED, SWJ	22 nd June 2020
HolFab.007	DWV Fittings, SN6, SN8, SN10	Fabfit/ Holman	DWV, SN6, SN8, SN10, ELBOWS, 100MM - 375MM, 2.5 DEGREE - 90 DEGREE, M&F, MOULDED/ FABRICATED, SWJ	22 nd June 2020
HolFab.008	DWV Fittings, SN4, SN8, SN10	Fabfit/ Holman	DWV, SN4, SN8, SN10, FLANGES, TABLE D, 100MM - 375MM, MOULDED/ FABRICATED, SWJ	22 nd June 2020
HolFab.009	DWV Fittings, SN4, SN6, SN8, SN10	Fabfit/ Holman	DWV, SN4, SN6, SN8, FLAP VALVE MOZZIE PROOF, 100MM - 225MM MOULDED/ FABRICATED, SWJ	22 nd June 2020
HolFab.010	DWV Fittings, SN4, SN6, SN8	Fabfit/ Holman	DWV, SN4, SN6, SN8 - FLAP VALVE, 100MM - 375MM MOULDED/ FABRICATED, SWJ	22 nd June 2020
HolFab.011	DWV Fittings, SN6, SN8, SN10	Fabfit/ Holman	DWV, SN6, SN8, SN10, INSPECTION OPENING (IO), 100MM - 375MM MOULDED/ FABRICATED, SWJ	22 nd June 2020
HolFab.012	DWV Fittings, SN6, SN8, SN10	Fabfit/ Holman	DWV, SN6, SN8, SN10, 100MM - 375MM JUNCTIONS, 45 DEGREE - 90 DEGREE (M&F) MOULDED/ FABRICATED, SWJ	22 nd June 2020



Product Schedule

Model Id	Model Name	Brand Name	Product Description	Endorsement Date
HolFab.013	DWV Fittings, SN6, SN8, SN10	Fabfit/ Holman	DWV, SN6, SN8, SN10, 100MM - 375MM JUNCTIONS, 45 DEGREE - 90 DEGREE (F&F) MOULDED/ FABRICATED, SWJ	22 nd June 2020
HolFab.014	DWV Fittings, SN6, SN8	Fabfit/ Holman	DWV, SN6, SN8, LEVEL INVERT TAPER (LIT), 100MM - 375MM MOULDED/ FABRICATED-, SWJ	22 nd June 2020
HolFab.015	DWV Fittings, SN6, SN8	Fabfit/ Holman	DWV, SN6, SN8, 100MM - 375MM REDUCER BUSH/ INPIPE, MOULDED/ FABRICATED, SWJ	22 nd June 2020
HolFab.016	DWV Fittings, SN4, SN6, SN8	Fabfit/ Holman	DWV, SN4, SN6, SN8 SLAB REPAIR, 100MM - 375MM MOULDED/ FABRICATED, SWJ	22 nd June 2020
HolFab.017	DWV Fittings, SN6, SN8, SN10	Fabfit/ Holman	DWV, SN6, SN8, SN10 - TAPPING SADDLES, 100MM - 375MM, 45 DEGREE - 90 DEGREE, MOULDED/ FABRICATED, SWJ	22 nd June 2020
HolFab.018	DWV Fittings, SN8	Fabfit/ Holman	DWV, SN8 EXPANSION COUPLING, 150MM - 375MM, MOULDED/ FABRICATED	22 nd June 2020
HolFab.019	DWV Fittings, SN8, SN10	Fabfit/ Holman	DWV, SN8, SN10, RR, 100MM - 375MM, 15 DEGREE - 90 DEGREE, BEND, F&F UNGLASSED, MOULDED/ FABRICATED	22 nd July 2019
HolFab.020	DWV Fittings, SN8, SN10	Fabfit/ Holman	DWV, SN8, SN10, RR, 100MM - 375MM, 5 DEGREE - 90 DEGREE, BEND, M&F UNGLASSED, MOULDED/ FABRICATED	30 th November 2021
HolFab.021	DWV Fittings, SN8, SN10	Fabfit/ Holman	DWV, SN8, SN10, RR, 100MM - 375MM, 5 DEGREE - 90 DEGREE, BEND, F&F GLASSED, MOULDED/ FABRICATED	30 th November 2021
HolFab.022	DWV Fittings, SN8, SN10	Fabfit/ Holman	DWV, SN8, SN10, RR, 100MM - 375MM, 15 DEGREE - 90 DEGREE, BEND, M&F GLASSED, MOULDED/ FABRICATED	22 nd July 2019
HolFab.023	DWV Fittings, SN8, SN10	Fabfit/ Holman	DWV, SN8, SN10, RR, 100MM - 375MM MANHOLE COUPLING, SANDED/ UNSANDED, M&F, M&M	30 th November 2021
HolFab.024	DWV Fittings, SN8, SN10	Fabfit/ Holman	DWV, SN8, SN10, RR, 100MM - 375MM MANHOLE COUPLING, SANDED/ UNSANDED, F&F	30 th November 2021
HolFab.025	DWV Fittings, SN8, SN10	Fabfit/ Holman	DWV, SN8, SN10, INSERT RING, RR, SWJ, 100MM - 375MM, MOULDED/ FABRICATED	22 nd July 2019
HolFab.026	DWV Fittings, SN8, SN10	Fabfit/ Holman	DWV, SN8, SN10, RR, INSPECTION OPENING (IO), 2 CAP, 100MM - 375MM, UNGLASSED, MOULDED/ FABRICATED	22 nd July 2019
HolFab.027	DWV Fittings, SN8, SN10	Fabfit/ Holman	DWV, SN8, SN10, RR, INSPECTION OPENING (IO), 2 CAP, 100MM - 375MM, GLASSED, MOULDED/ FABRICATED	22 nd July 2019
HolFab.028	DWV Fittings, SN8, SN10	Fabfit/ Holman	DWV, SN8, SN10, RR, DEEP SEWER JUNCTION, 100MM - 375MM, 45 DEGREE - 90 DEG UNGLASSED, MOULDED/ FABRICATED	22 nd July 2019
HolFab.029	DWV Fittings, SN8, SN10	Fabfit/ Holman	DWV, SN8, SN10, RR, DEEP SEWER JUNCTION, 100MM - 375MM, 45 DEGREE - 90 DEGREE GLASSED, MOULDED/ FABRICATED	22 nd July 2019
HolFab.030	DWV Fittings, SN8, SN10	Fabfit/ Holman	DWV, SN8, SN10, RR, JUNCTION, F&F, 100MM - 375MM, 45 DEGREE - 90 DEGREE, UNGLASSED, MOULDED/ FABRICATED	22 nd July 2019



Product Schedule

Model Id	Model Name	Brand Name	Product Description	Endorsement Date
HolFab.031	DWV Fittings, SN8, SN10	Fabfit/ Holman	DWV, SN8, SN10, RR, JUNCTION, F&F, 100MM - 375MM, 45 DEGREE - 90 DEGREE, GLASSED, MOULDED/ FABRICATED	22 nd July 2019
HolFab.032	DWV Fittings, SN8, SN10	Fabfit/ Holman	DWV, SN8, SN10, RR, JUNCTION, M&F, 100MM - 375MM, 45 DEGREE - 90 DEGREE, UNGLASSED, MOULDED/ FABRICATED	22 nd July 2019
HolFab.033	DWV Fittings, SN8, SN10	Fabfit/ Holman	DWV, SN8, SN10, RR, JUNCTION, M&F, 100MM - 375MM, 45 DEGREE - 90 DEGREE, GLASSED, MOULDED/ FABRICATED	22 nd July 2019
HolFab.034	DWV Fittings, SN8, SN10	Fabfit/ Holman	DWV, SN8, SN10, RR, JUNCTION WITH CAP, 100MM - 375MM, 45 DEGREE - 90 DEGREE, GLASSED, MOULDED/ FABRICATED	22 nd July 2019
HolFab.035	DWV Fittings, SN8, SN10	Fabfit/ Holman	DWV, SN8, SN10, RR, JUNCTION WITH SWJ BRANCH, 100MM - 375MM, 45 DEGREE - 90 DEGREE, GLASSED, MOULDED/ FABRICATED	22 nd July 2019
HolFab.036	DWV Fittings, SN8	Fabfit/ Holman	DWV, SN8, RR, LEVEL INVERT TAPER (LIT), 100MM - 375MM UNGLASSED MOULDED/ FABRICATED	22 nd July 2019
HolFab.037	DWV Fittings, SN8, SN10	Fabfit/ Holman	DWV, SN8, SN10 RR, LEVEL INVERT TAPER (LIT), 100MM - 375MM GLASSED, MOULDED/ FABRICATED	22 nd June 2020
HolFab.038	DWV Fittings, SN8	Fabfit/ Holman	PN12, SN8, DWV SOCKET, RR, 150MM - 300MM, SANDED/ UNSANDED M&F	22 nd June 2020
HolFab.039	DWV Fittings, SN8	Fabfit/ Holman	PN12, SN8, DWV SOCKET, RR, 150MM - 300MM, SANDED/ UNSANDED F&F	22 nd June 2020
HolFab.040	DWV Fittings, SN8	Fabfit/ Holman	DN150 DWV, SN8, RR, 1000 RADIUS, 2.5 DEGREE - 90 DEGREE BENDS M&F	22 nd June 2020
HolFab.041	DWV Fittings, SN8	Fabfit/ Holman	DN150 DWV, SN8, RR, 3000 RADIUS, 2.5 DEGREE - 90 DEGREE BENDS M&F	22 nd June 2020
HolFab.042	DWV Fittings, SN8	Fabfit/ Holman	DN150 DWV, SN8, RR, 635 RADIUS, 2.5 DEGREE - 90 DEGREE BENDS M&F	22 nd June 2020
HolFab.043	DWV Fittings, SN8, SN10	Fabfit/ Holman	DWV, SN8, VERTICAL BACK DROP ASSEMBLY 100MM - 150MM, MOULDED/ FABRICATED	22 nd July 2019
HolFab.044	DWV Fittings, SN8, SN10	Fabfit/ Holman	DWV, SN8, DROP JUNCTIONS 100MM - 300MM, MOULDED/ FABRICATED, SWJ & RR	22 nd June 2020
HolFab.045	DWV Fittings, SN6, SN8, SN10	Fabfit/ Holman	DWV, SN6, SN8, DROP BENDS F&F M&F 100MM - 300MM, MOULDED/ FABRICATED, SWJ	22 nd June 2020
HolFab.046	DWV Fittings SN6, SN8	Fabfit/Holman	DWV SN6, SN8 100mm - 300mm CAPS SWJ / THREADED	22 nd June 2020
HolFab.047	DWV Fittings SN6, SN8	Fabfit/Holman	DWV SN6, SN8 100mm - 150mm SPIGOT ACCESS ADAPTOR	22 nd June 2020
HolFab.048	DWV HEAVY DUTY RRJ	FABFIT /HOLMAN	DWV HEAVY DUTY MOULDED RR , 2 CAP(IO) 100MM	19 th April 2021
HolFab.049	DWV HEAVY DUTY RRJ	FABFIT /HOLMAN	DWV HEAVY DUTY MOULDED RR,FF BENDS 45D EG 100MM-150mm	19 th April 2021
HolFab.050	DWV HEAVY DUTY RRJ	FABFIT /HOLMAN	DWV HEAVY DUTY MOULDED RR MF BENDS 43DEG 100MM-150mm	19 th April 2021



Product Schedule

Model Id	Model Name	Brand Name	Product Description	Endorsement Date
HolFab.051	DWV HEAVY DUTY RRJ	FABFIT /HOLMAN	DWV HEAVY DUTY MOULDED RR FF COULPNGS 100mm-150MM	19 th April 2021
HolFab.052	DWV HEAVY DUTY RRJ	FABFIT /HOLMAN	DWV HEAVY DUTY MOULDED RR ,FF,MF JUNCTIONS 150x100x45D – 150x150x45	19 th April 2021

End of record

Certificate No. AMI 21246

The models identified above in the schedule are endorsed for ISO Type 5 application only.

ApprovalMark

ISO TYPE 5

CERTIFICATE OF CONFORMITY



ApprovalMark International hereby grants:

HOLMAN INDUSTRIES

11 Walters Drive
Osborne Park, WA 6017
AUSTRALIA

ISO Type 5 Certificate of Conformity

Evaluated to:

AS/NZS 1260:2017 – PVC-U pipes and fittings for drain, waste and vent application

The ISO Type 5 License shall comply with all the terms and conditions as stipulated by the governance of the operating rules of the ISO Type 5 Scheme and shall comply with the standard requirements at all times including when the standard is amended. The ISO Type 5 License only covers the product which is identified in the attached product schedule.

Certificate No. AMI 74772

Issued: 13th July 2023

Original Issue: 23rd July 2020

Expires: 23rd July 2026

John PRASAD

Director

ApprovalMark International Pty Ltd
18/33 Holbeche Road, Arndell Park 2148, Australia
www.approvalmark.com



Registered by: ApprovalMark International Pty Ltd (ABN 69 143 259 974) Unit 18, 33 Holbeche Road, Arndell Park NSW 2148 Australia. The assessment was carried with appropriate skill and assessment by ApprovalMark International Pty Ltd, however it will only accept its responsibility for proven negligence. The certificate remains the property of ApprovalMark International Pty Ltd.

ApprovalMark™



Product Schedule

HOLMAN INDUSTRIES

11 Walters Drive
Osborne Park, WA 6017
AUSTRALIA

ISO Type 5 Certificate of Conformity

Evaluated to:

AS/NZS 1260:2017 – PVC-U pipes and fittings for drain, waste, and vent application

Model Id	Model Name	Brand Name	Product Description	Endorsement Date
DWVF0165	DWV INPIPE SOCKET	HOLMAN	DWV PVC BEND IN PIPE x SOCKET 100MM 43DEG	11 th October 2021
DWVF0166	DWV INPIPE SOCKET	HOLMAN	DWV PVC BEND IN PIPE x SOCKET 100MM 88DEG	11 th October 2021
DWVF0077	DWV F&F BEND	HOLMAN	DWV PVC BEND F&F 100MM 60DEG	11 th October 2021
DWVF0147	DWV F&F BEND	HOLMAN	DWV PVC BEND M&F 100MM 60DEG	11 th October 2021
DWVF0010_	DWVF0010	HOLMAN	PVC DWV ADAPTOR 40FI	20 th June 2018
DWVF0012_	DWVF0012	HOLMAN	PVC DWV ADAPTOR 50FI	20 th June 2018
DWVF0020_	DWVF0020	HOLMAN	PVC DWV ADAPTOR 40MI	20 th June 2018
DWVF0022_	DWVF0022	HOLMAN	PVC DWV ADAPTOR 50MI	20 th June 2018
DWVF0052_	DWVF0052	HOLMAN	PVC DWV BEND F&F 40 X 45< PLN	20 th June 2018
DWVF0058_	DWVF0058	HOLMAN	PVC DWV BEND F&F 50 X 45< PLN	20 th June 2018
DWVF0062_	DWVF0062	HOLMAN	PVC DWV BEND F&F 65 X 45< PLN	20 th June 2018
DWVF0070_	DWVF0070	HOLMAN	PVC DWV BEND F&F 100 X 5<	20 th June 2018
DWVF0072_	DWVF0072	HOLMAN	PVC DWV BEND F&F 100 X 15<	20 th June 2018
DWVF0074_	DWVF0074	HOLMAN	PVC DWV BEND F&F 100 X 30<	20 th June 2018
DWVF0076_	DWVF0076	HOLMAN	PVC DWV BEND F&F 100 X 45<	20 th June 2018
DWVF0078_	DWVF0078	HOLMAN	PVC DWV BEND F&F 100 X 88<	20 th June 2018
DWVF0120_	DWVF0120	HOLMAN	PVC DWV BEND M&F 40 X 45<	20 th June 2018
DWVF0124_	DWVF0124	HOLMAN	PVC DWV BEND M&F 50 X 45< PLN	20 th June 2018
DWVF0128_	DWVF0128	HOLMAN	PVC DWV BEND M&F 50 X 40 X 45< PLN	20 th June 2018
DWVF0138_	DWVF0138	HOLMAN	PVC DWV BEND M&F 100 X 5<	20 th June 2018
DWVF0140_	DWVF0140	HOLMAN	PVC DWV BEND M&F 100 X 15<	20 th June 2018
DWVF0142_	DWVF0142	HOLMAN	PVC DWV BEND M&F 100 X 30<	20 th June 2018



Product Schedule

Model Id	Model Name	Brand Name	Product Description	Endorsement Date
DWVF0170_	DWVF0170	HOLMAN	PVC DWV Bolted Trap Screw 100mm	20 th June 2018
DWVF0172_	DWVF0172	HOLMAN	PVC DWV BOLTED TRAP SCREW FEMALE 150MM	20 th June 2018
DWVF0190_	DWVF0190	HOLMAN	PVC DWV PUSH ON CAP 40MM	20 th June 2018
DWVF0192_	DWVF0192	HOLMAN	PVC DWV PUSH ON CAP 50MM	20 th June 2018
DWVF0194_	DWVF0194	HOLMAN	PVC DWV PUSH ON CAP 65MM	20 th June 2018
DWVF0196_	DWVF0196	HOLMAN	PVC DWV PUSH ON CAP 80MM	20 th June 2018
DWVF0198_	DWVF0198	HOLMAN	PVC DWV PUSH ON CAP 100MM	20 th June 2018
DWVF0206_	DWVF0206	HOLMAN	PVC BLANKING DUST CAP 100MM	20 th June 2018
DWVF0230_	DWVF0230	HOLMAN	PVC DWV CONNECTOR 40FI	20 th June 2018
DWVF0232_	DWVF0232	HOLMAN	PVC DWV CONNECTOR 50FI	20 th June 2018
DWVF0240_	DWVF0240	HOLMAN	PVC DWV CONNECTOR 40MI	20 th June 2018
DWVF0242_	DWVF0242	HOLMAN	PVC DWV CONNECTOR 50MI	20 th June 2018
DWVF0260_	DWVF0260	HOLMAN	PVC DWV STANDARD COUPLING 40MM	20 th June 2018
DWVF0262_	DWVF0262	HOLMAN	PVC DWV STANDARD COUPLING 50MM	20 th June 2018
DWVF0264_	DWVF0264	HOLMAN	PVC DWV STANDARD COUPLING 65MM	20 th June 2018
DWVF0268_	DWVF0268	HOLMAN	100mm Plain Coupling	20 th June 2018
DWVF0270_	DWVF0270	HOLMAN	PVC DWV ACCESS COUPLING 100MM	20 th June 2018
DWVF0280_	DWVF0280	HOLMAN	PVC DWV FINISHING COLLAR FEMALE 100MM	20 th June 2018
DWVF0290_	DWVF0290	HOLMAN	PVC DWV FLAP VALVE W/- PVC FLAP 50MM	20 th June 2018
DWVF0300_	DWVF0300	HOLMAN	PVC DWV FLOOR FLANGE 40MM	20 th June 2018
DWVF0302_	DWVF0302	HOLMAN	PVC DWV FLOOR FLANGE 50MM	20 th June 2018
DWVF0304_	DWVF0304	HOLMAN	PVC DWV FLOOR FLANGE 100MM	20 th June 2018
DWVF0328_	DWVF0328	HOLMAN	PLASTIC P TRAP GRATE DOMED #1 W/LEGS	20 th June 2018
DWVF0330_	DWVF0330	HOLMAN	PVC FLAT GRATE FOR FINISHING COLLAR 100MM	20 th June 2018
DWVF0332_	DWVF0332	HOLMAN	PVC DOMED GRATE FOR FINISHING COLLAR 100MM	20 th June 2018
DWVF0344_	DWVF0344	HOLMAN	PVC DWV JUNCTION 50 X 45< PLN	20 th June 2018
DWVF0352_	DWVF0352	HOLMAN	PVC DWV JUNCTION 100 X 50 X 45< PLN	20 th June 2018
DWVF0354_	DWVF0354	HOLMAN	PVC DWV JUNCTION 100 X 65 X 45< PLN	20 th June 2018
DWVF0356_	DWVF0356	HOLMAN	PVC DWV JUNCTION F&F 100 X 45<	20 th June 2018
DWVF0380_	DWVF0380	HOLMAN	PVC DWV LEVEL INVERT TAPER 50 X 40	20 th June 2018
DWVF0382_	DWVF0382	HOLMAN	PVC DWV LEVEL INVERT TAPER 65 X 40	20 th June 2018



Product Schedule

Model Id	Model Name	Brand Name	Product Description	Endorsement Date
DWVF0384_	DWVF0384	HOLMAN	PVC DWV LEVEL INVERT TAPER 65 X 50	20 th June 2018
DWVF0392_	DWVF0392	HOLMAN	PVC DWV LEVEL INVERT TAPER 100 X 50	20 th June 2018
DWVF0394_	DWVF0394	HOLMAN	PVC DWV LEVEL INVERT TAPER 100 X 65	20 th June 2018
DWVF0408_	DWVF0408	HOLMAN	PVC DWV PAN COLLAR ADJUSTABLE LONG TAIL 100MM	20 th June 2018
DWVF0410_	DWVF0410	HOLMAN	DWV PVC Pan Collar 100mm M&F	20 th June 2018
DWVF0412_	DWVF0412	HOLMAN	DWV PVC Pan Collar 100mm M&F Adj	20 th June 2018
DWVF0422_	DWVF0422	HOLMAN	PVC DWV PAN COLLAR 100MM	20 th June 2018
DWVF0428_	DWVF0428	HOLMAN	PVC DWV REDUCING PIPE BUSH 100 X 40	20 th June 2018
DWVF0430_	DWVF0430	HOLMAN	PVC DWV REDUCING PIPE BUSH 100 X 50	20 th June 2018
DWVF0432_	DWVF0432	HOLMAN	PVC DWV REDUCING PIPE BUSH 100 X 65	20 th June 2018
DWVF0434_	DWVF0434	HOLMAN	PVC DWV REDUCING PIPE BUSH 50 X 40	20 th June 2018
DWVF0436_	DWVF0436	HOLMAN	PVC DWV REDUCING PIPE BUSH 65 X 40	20 th June 2018
DWVF0438_	DWVF0438	HOLMAN	PVC DWV REDUCING PIPE BUSH 65 X 50	20 th June 2018
DWVF0444_	DWVF0444	HOLMAN	PVC DWV P TRAP RISER 100X50X40X85< M&F MULT	20 th June 2018
DWVF0454_	DWVF0454	HOLMAN	PVC SAFE WASTE TRAY 40MM #39.40	20 th June 2018
DWVF0455_	DWVF0455	HOLMAN	PVC SAFE WASTE TRAY 50MM #39.50	20 th June 2018
DWVF0456_	DWVF0456	HOLMAN	PVC SAFE WASTE TRAY 65MM #39.65	20 th June 2018
DWVF0457_	DWVF0457	HOLMAN	PVC SAFE WASTE TRAY 80MM #39.80	20 th June 2018
DWVF0458_	DWVF0458	HOLMAN	PVC SAFE WASTE TRAY 100MM #39.100	20 th June 2018
DWVF0460_	DWVF0460	HOLMAN	PVC DWV SLAB REPAIR COUPLING OD/ID PIPE 40	20 th June 2018
DWVF0462_	DWVF0462	HOLMAN	PVC DWV SLAB REPAIR COUPLING OD/ID PIPE 50	20 th June 2018
DWVF0480_	DWVF0480	HOLMAN	PVC DWV REDUCING BUSH 50 X 40	20 th June 2018
DWVF0482_	DWVF0482	HOLMAN	PVC DWV REDUCING BUSH 65 X 40	20 th June 2018
DWVF0484_	DWVF0484	HOLMAN	PVC DWV REDUCING BUSH 65 X 50	20 th June 2018
DWVF0488_	DWVF0488	HOLMAN	PVC DWV REDUCING BUSH 100 X 40	20 th June 2018
DWVF0490_	DWVF0490	HOLMAN	PVC DWV REDUCING BUSH 100 X 50	20 th June 2018
DWVF0492_	DWVF0492	HOLMAN	PVC DWV REDUCING BUSH 100 X 65	20 th June 2018
DWVF0500_	DWVF0500	HOLMAN	PVC DWV ADAPTOR (BELL - SPIGOT) 100EWX100PVC	20 th June 2018
DWVF0542_	DWVF0542	HOLMAN	PVC DWV VENT COWL PLAIN 50MM	20 th June 2018



Product Schedule

Model Id	Model Name	Brand Name	Product Description	Endorsement Date
DWVF0548_	DWVF0548	HOLMAN	PVC DWV VENT COWL INSECT PROOF 50MM (WA)	20 th June 2018
DWVF0560_	DWVF0560	HOLMAN	PVC DWV WEATHERING APRON 50MM	20 th June 2018
DWVF0032_	DWVF0032	HOLMAN	PVC DWV BEND F&F 40 X 88< IO	22 nd July 2020
DWVF0036_	DWVF0036	HOLMAN	PVC DWV BEND F&F 50 X 88< IO	22 nd July 2020
DWVF0040_	DWVF0040	HOLMAN	PVC DWV BEND F&F 65 X 88< IO	22 nd July 2020
DWVF0054_	DWVF0054	HOLMAN	PVC DWV BEND F&F 40 X 88< PLN	22 nd July 2020
DWVF0060_	DWVF0060	HOLMAN	PVC DWV BEND F&F 50 X 88< PLN	22 nd July 2020
DWVF0064_	DWVF0064	HOLMAN	PVC DWV BEND F&F 65 X 88< PLN	22 nd July 2020
DWVF0144_	DWVF0144	HOLMAN	PVC DWV BEND M&F 100 X 43<	22 nd July 2020
100MIX100DWV_	100MIX100DWV	HOLMAN	DWV PVC 100 BSP MI TO DWV SOCKET	22 nd July 2020
DWVF0146_	DWVF0146	HOLMAN	DWV PVC BEND M&F 100 X 88DEG	22 nd July 2020
DWVF0252_	DWVF0252	HOLMAN	DWV PVC SLIP COUPLING 100MM	22 nd July 2020
DWVF0358_	DWVF0358	HOLMAN	DWV PVC JUNCTION F&F 100 X 88DEG	22 nd July 2020
DWVF0442_	DWVF0442	HOLMAN	DWV PVC P TRAP RISER 100X50X50X40X40 88DEG	22 nd July 2020
DWVF0468_	DWVF0468	HOLMAN	DWV PVC SLAB ADAPTOR 150MM	22 nd July 2020
DWVF0530_	DWVF0530	HOLMAN	DWV PVC TRAP DISCONNECTOR 100MM ADJ	22 nd July 2020
HCLIT150X100_	HCLIT150X100	HOLMAN	HOLCIVIL HD DWV LEVEL INVERT TAPER 150X100MM	22 nd July 2020
LITMD225X100_	LITMD225X100	HOLMAN	DWV LEVEL INVERT TAPER 225X100MM	22 nd July 2020
RBMD150X100_	RBMD150X100	HOLMAN	DWV REDUCING BUSH 150X100MM	22 nd July 2020
SCMD150_	SCMD150	HOLMAN	DWV SLIP COUPLING 150MM	22 nd July 2020
TSMD150X100X90_	TSMD150X100X90	HOLMAN	DWV TAPPING SADDLE 150X100MM 90DEG	22 nd July 2020
ELBMD150X15_	ELBMD150X15	HOLMAN	DWV BEND F&F 150 X 15DEG	22 nd July 2020
ELBMD150X5MF_	ELBMD150X5MF	HOLMAN	DWV BEND M&F 150 X 5DEG	22 nd July 2020
ELBMD150X45	ELBMD150X45	HOLMAN	DWV BEND F&F 150 X 45DEG	22 nd July 2020
HC100x45_	HC100x45	HOLMAN	DWV PVC HOLCIVIL Heavy Duty Bend 100mmx45deg	22 nd July 2020
HC100x88_	HC100x88	HOLMAN	DWV PVC HOLCIVIL Heavy Duty Bend 100mmx88deg	22 nd July 2020
HC100x43MF_	HC100x43MF	HOLMAN	DWV PVC HOLCIVIL Heavy Duty M&F Bend 100mmx43deg	22 nd July 2020
HCJ100x45_	HCJ100x45	HOLMAN	DWV PVC HOLCIVIL Heavy Duty Junction 100mmx45deg	22 nd July 2020



Product Schedule

Model Id	Model Name	Brand Name	Product Description	Endorsement Date
HCIO100_	HCIO100	HOLMAN	DWV PVC HOLCIVIL Heavy Duty Junction 100mmx100mmx90 deg	22 nd July 2020
HCB150x43MF_	HCB150x43MF	HOLMAN	DWV PVC HOLCIVIL Heavy Duty M&F Bend 150mmx43deg	22 nd July 2020
HCB150x45_	HCB150x45	HOLMAN	DWV PVC HOLCIVIL Heavy Duty Bend 150mmx45deg	22 nd July 2020
HCB150x88	HCB150x88	HOLMAN	DWV PVC HOLCIVIL Heavy Duty Bend 150mmx88deg	22 nd July 2020
HCIO150_	HCIO150	HOLMAN	DWV PVC HOLCIVIL Heavy Duty Junction 150mmx150mm	22 nd July 2020
HCJ150x100x45_	HCJ150x100x45	HOLMAN	DWV PVC HOLCIVIL Heavy Duty Junction 150mmx100mmx45deg	22 nd July 2020
HCJ150x45	HCJ150x45	HOLMAN	DWV PVC HOLCIVIL Heavy Duty Junction 150mmx150mmx45deg	22 nd July 2020
DWV0356_	DWV0356	HOLMAN	DWV PVC Junction 100mmx45deg	22 nd July 2020
DWVF0126_	DWVF0126	HOLMAN	DWV PVC M&F Bend 50mmx88deg	22 nd July 2020
DWVF0346_	DWVF0346	HOLMAN	DWV PVC Junction 50mmx88deg	22 nd July 2020
DWVF0200_	DWVF0200	HOLMAN	PVC DWV PUSH ON CAP 150MM	2 nd November 2022
DWVF0202_	DWVF0202	HOLMAN	PVC DWV INTERNAL CAP 100MM	2 nd November 2022
DWVF0272_	DWVF0272	HOLMAN	PVC DWV ACCESS COUPLING 150MM	2 nd November 2022
DWVF0360_	DWVF0360	HOLMAN	PVC DWV JUNCTION M&F 100 X 45 DEG	2 nd November 2022
DWVF0362_	DWVF0362	HOLMAN	PVC DWV JUNCTION M&F 100 X 88 DEG	2 nd November 2022
DWVF0400_	DWVF0400	HOLMAN	PVC DWV LEVEL INVERT TAPER 150 X 100	2 nd November 2022
DWVF0466_	DWVF0466	HOLMAN	PVC DWV SLAB REPAIR COUPLING 100MM	2 nd November 2022
DWVF0510_	DWVF0510	HOLMAN	PVC DWV INSPECTION OPENING M&F 100 X 45 DEG	2 nd November 2022
DWVF0520_	DWVF0520	HOLMAN	PVC DWV INSPECTION OPENING M&F 100 X 88 DEG	2 nd November 2022
EMRR100X43MF_	EMRR100X43MF	HOLMAN	PVC DWV RRJ BEND M&F 100 X 43 DEG	2 nd November 2022
EMRR150X43MF_	EMRR150X43MF	HOLMAN	PVC DWV RRJ BEND M&F 150 X 43 DEG	2 nd November 2022
EMRR150X45_	EMRR150X45	HOLMAN	PVC DWV RRJ BEND F&F 150 X 45 DEG	2 nd November 2022
JMRR150X100X45MF_	JMRR150X100X45MF	HOLMAN	PVC DWV RRJ JUNCTION M&F 150 X 100 X 45 DEG	2 nd November 2022
JMRR150X150X45_	JMRR150X150X45	HOLMAN	PVC DWV RRJ JUNCTION F&F 150 X 150 X 45 DEG	2 nd November 2022



Product Schedule

Model Id	Model Name	Brand Name	Product Description	Endorsement Date
JMRR150X150X45MF_	JMRR150X150X45MF	HOLMAN	PVC DWV RRJ JUNCTION M&F 150 X 150 X 45 DEG	2 nd November 2022
RSCMRR100_	RSCMRR100	HOLMAN	PVC DWV RRJ SLIP COUPLING 100MM	2 nd November 2022
ELBMD225X5_	ELBMD225X5	HOLMAN	PVC DWV BEND F&F 225 X 5 DEG	2 nd November 2022
ELBMD225X15_	ELBMD225X15	HOLMAN	PVC DWV BEND F&F 225 X 15 DEG	2 nd November 2022
ELBMD300X15_	ELBMD300X15	HOLMAN	PVC DWV BEND F&F 300 X 15 DEG	2 nd November 2022
JUNMD225X100X88_	JUNMD225X100X88	HOLMAN	PVC DWV JUNCTION F&F 225 X 100 X 88	2 nd November 2022
JUNMD225X150X88_	JUNMD225X150X88	HOLMAN	PVC DWV JUNCTION F&F 225 X 150 X 88	2 nd November 2022
JUNMD225X225X88_	JUNMD225X225X88	HOLMAN	PVC DWV JUNCTION F&F 225 X 225 X 88	2 nd November 2022
JUNMD300X225X45_	JUNMD300X225X45	HOLMAN	PVC DWV JUNCTION F&F 300 X 225 X 45 DEG	2 nd November 2022
JUNMD300X300X45_	JUNMD300X300X45	HOLMAN	PVC DWV JUNCTION F&F 300 X 300 X 45 DEG	2 nd November 2022
JUNMD300X150X88_	JUNMD300X150X88	HOLMAN	PVC DWV JUNCTION F&F 300 X 150 X 88 DEG	2 nd November 2022
JUNMD300X300X88_	JUNMD300X300X88	HOLMAN	PVC DWV JUNCTION F&F 300 X 300 X 88 DEG	2 nd November 2022
ELBMD150X88_	ELBMD150X88	HOLMAN	PVC DWV BEND F&F 150 x 88 DEG	2 nd November 2022
FEH100MF_	FEH100MF	HOLMAN	100MM DWV SN10 RRJ MANHOLE UNSANDED SOCKET M&F	13 th July 2023
FEH150MF_	FEH150MF	HOLMAN	150MM DWV SN8 RRJ MANHOLE UNSANDED SOCKET M&F	13 th July 2023
FEH225MF_	FEH225MF	HOLMAN	225MM DWV SN8 RRJ MANHOLE UNSANDED SOCKET M&F	13 th July 2023
FEH300MF_	FEH300MF	HOLMAN	300MM DWV SN8 RRJ MANHOLE UNSANDED SOCKET M&F	13 th July 2023
HCB100X60_	HCB100X60	HOLMAN	100X60DEG DWV SN8 SWJ HOLCIVIL HD BEND F&F	13 th July 2023
HCB150X60_	HCB150X60	HOLMAN	150X60DEG DWV SN8 SWJ HOLCIVIL HD BEND F&F	13 th July 2023
HCJ100X88_	HCJ100X88	HOLMAN	100X88DEG DWV SN10 SWJ HOLCIVIL HD JUNCTION F&F	13 th July 2023
HCJ150X88_	HCJ150X88	HOLMAN	150X88DEG DWV SN8 SWJ HOLCIVIL HD JUNCTION F&F	13 th July 2023
IMRR100_	IMRR100	HOLMAN	100MM DWV SN10 RRJ INSERT RING FITTING	13 th July 2023
IMRR150_	IMRR150	HOLMAN	150MM DWV SN8 RRJ INSERT RING FITTING	13 th July 2023



Product Schedule

Model Id	Model Name	Brand Name	Product Description	Endorsement Date
IMRR225_	IMRR225	HOLMAN	225MM DWV SN8 RRJ INSERT RING FITTING	13 th July 2023
IMRR300_	IMRR300	HOLMAN	300MM DWV SN8 RRJ INSERT RING FITTING	13 th July 2023
IOMRR1502CAP_	IOMRR1502CAP	HOLMAN	150X88DEG DWV SN8 RRJ HD INSPECTION IO 2 CAPS MOULDED	13 th July 2023
JMRC150X150X45_	JMRC150X150X45	HOLMAN	150X150X45DEG DWV SN8 RRJ/SWJ HD JUNCTION W/CAP MOULDED	13 th July 2023
JMRR150X150X88_	JMRR150X150X88	HOLMAN	150X150X88DEG DWV SN8 RRJ HD JUNCTION F&F MOULDED	13 th July 2023

End of record

Certificate No. AMI 74772

The models identified above in the schedule are endorsed for ISO Type 5 application only.



BEST ENVIRONMENTAL PRACTICE



ApprovalMark International hereby grants:

FABFIT T/A HOLMAN INDUSTRIES

4/90 Quinns Hill Road East
Staplyton, QLD 4207
Australia

Best Environmental Practice - PVC

Evaluated to:

AS/NZS 1260:2017 - PVC-U Pipes and fittings for drain, waste and vent applications

AS/NZS 1254:2010 - PVC-U Pipes and fittings for stormwater and surface water applications

The licensee complies with the requirements of Best Environmental Practice – PVC as per the relevant Australian or International Standard and Section 7 as specified in the Green Building Council of Australia ("the Requirements") Literature Review and Best Practice Guidelines for the Life Cycle of PVC Building Product's using the compliance pathway Number 2 - Manufacturer's Declaration as measured by the Green Star PVC Credit Auditor Verification Guidance - November 2013 ("the Criteria").

The documentation was reviewed during a product certification audit conducted by ApprovalMark International and found to comply with the following requirements:

- **Manufacture of PVC Resin**
- **Manufacture and end of life management of PVC products**
- **Use of PVC Recyclate in PVC products**

Note - Any changes introduced to the above requirements shall be immediately reported to ApprovalMark International in order to confirm the validity of the certificate.

Certificate No. BEP-PVC 78006

Issued: 18th April 2023
Expires: 10th March 2025

Originally Certified: 10th March 2017
Current Certification: 18th April 2023

John PRASAD
Director

BEP
CERTIFIED

ApprovalMark



BEST ENVIRONMENTAL PRACTICE



ApprovalMark International hereby grants:

HOLMAN INDUSTRIES
11 Walters Drive
Osborne Park, WA 6017
Australia

Best Environmental Practice - PVC

Evaluated to:

AS/NZS 1260:2017 - PVC-U Pipes and fittings for drain, waste and vent applications
AS/NZS 1254:2010 - PVC-U Pipes and fittings for stormwater and surface water applications

The licensee complies with the requirements of Best Environmental Practice – PVC as per the relevant Australian or International Standard and Section 7 as specified in the Green Building Council of Australia ("the Requirements") Literature Review and Best Practice Guidelines for the Life Cycle of PVC Building Product's using the compliance pathway Number 2 - Manufacturer's Declaration as measured by the Green Star PVC Credit Auditor Verification Guidance - November 2013 ("the Criteria").

The documentation was reviewed during a product certification audit conducted by ApprovalMark International and found to comply with the following requirements:

- **Manufacture of PVC Resin**
- **Manufacture and end of life management of PVC products**
- **Use of PVC Recyclate in PVC products**

Note - Any changes introduced to the above requirements shall be immediately reported to ApprovalMark International in order to confirm the validity of the certificate.

Certificate No. BEP-PVC 78003

Issued: 18th April 2023
Expires: 10th March 2025

Originally Certified: 10th March 2017
Current Certification: 18th April 2023

John PRASAD
Director

**BEP
CERTIFIED**

ApprovalMark

APPENDIX C - SUPPLIER CONTACTS

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Stapylton QLD 4207
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Mount Druitt NSW 2770
Ph: 02 9832 3298

Victoria

145 Northcorp Boulevard
Broadmeadows VIC 3047
Ph: 03 8335 4444

Queensland

Unit 1 & 2, 68 Lisgar Street
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Ph: 07 3834 2100



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