

Viega Technology GmbH & Co. KG

PRODUCT APPRAISAL REPORT PA 1811

Geopress Fittings for PE Pipe

**AS/NZS 4129:2008 Fittings for polyethylene (PE) pipes for
pressure applications**

Published: 21 August 2019

Document History

The following information indicates the changes made to this document.

Date	Version
29 July 2019	Client Review
20 August 2019	Peer Review
21 August 2019	Publication

Peer Reviewers

Name/Title	Organisation	Date
Product Appraisal Technical Advisory Group	WSAA	20 August 2019
WSAA Expert Panel	WSAA	20 August 2019
Peter Pittard, WSAA Consultant	WSAA	30 July 2019
Carl Radford, Product Appraisal Manager	WSAA	21 August 2019

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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CONTENTS

1 EXECUTIVE SUMMARY	5
1.1 Recommendations	5
2 THE APPLICANT	5
2.1 The Supplier	5
2.2 The Manufacturer	5
3 THE PRODUCT	5
4 SCOPE OF THE APPRAISAL	7
5 APPRAISAL CRITERIA	7
5.1 Quality Assurance Requirements	7
5.2 Performance Requirements	7
6 COMPLIANCE WITH APPRAISAL CRITERIA	8
6.1 Compliance with Quality Assurance Requirements	8
6.2 Compliance with Performance Requirements	8
6.2.1 Materials	8
6.2.2 Performance testing	8
6.2.3 Effect on water	8
7 FITTING INSTRUCTIONS, TRAINING AND INSTALLATION	8
8 PRODUCT MARKING	9
9 PACKAGING AND TRANSPORTATION	9
10 PRODUCT WARRANTY	9
11 WATER AGENCY EXPERIENCE WITH THE PRODUCT OR FIELD TESTING REPORT	9
12 OUTCOMES OF EXPERT PANEL PRODUCT REVIEW	9
13 FUTURE WORKS	9
14 DISCLAIMER	9
14.1 Issue of Report	10
14.2 Limits on Reliance on Information and Recommendations	10
14.2.1 Disclaimer of liability	10
14.2.2 Intellectual Property and other rights	10
14.2.3 Need for independent assessment	10
14.3 No Updating	11
14.4 No Warranty	11
APPENDIX A – PRODUCT LITERATURE	12
APPENDIX B - QUALITY CERTIFICATIONS	18
APPENDIX C - WSA PRODUCT SPECIFICATION	26
APPENDIX D - SUPPLIER CONTACTS	29

1 EXECUTIVE SUMMARY

Viega Technology GmbH & Co KG is a family owned company with its origins dating back to 1899 in Germany and is now an international market leader in the installation technology sector with over 4000 employees in 10 locations throughout the world. The company manufactures and supplies products for a wide range of sectors including building construction, industrial plant construction, shipbuilding and water and gas utilities.

Viega Pty Ltd, located in Baulkham Hills NSW, is the Australian based sales and distribution arm of the Company.

This appraisal is for a range of Geopress plastics fittings for use with PE100 pipe. The fittings range consists of tees, elbows, and couplings in sizes DN 25, DN 32, DN 40, DN 50 and DN 63 and under pressure tapping valves in sizes DN 63, DN 125, DN 180 and DN 225. The under pressure tapping valves consist of a tapping band with an integral valve.

The fittings within the range all utilise a unique press jointing system for leak tight connection to the PE pipe without the need for elastomers. The pipe is pressed on to the support sleeve of the connection joint with a battery-operated press gun to provide internal sealing and a high tensile connection.

The Geopress fittings conform with AS/NZS 4129:2008 *Fittings for polyethylene (PE) pipes for pressure applications* and the valves comply with WMTS 012:2018 *In-line valves for use in plumbing water supply systems* and have ISO Type 5 product certification.

Viega has a quality management system complying with ISO 9001:2015.

This Appraisal has determined that Viega Geopress PE fittings for use with PE100 pipe, as detailed in Section 3, comply with the requirements of WSA PS 208 – *Plastics Moulded Fittings for Pressure Applications with PE Pipe – Water Supply and Sewerage* and WSA PS 327 *Tapping Bands, Mechanical, for use with Polyethylene (PE) Mains for Pressure Applications – Water Supply* and are considered as ‘fit for purpose’.

1.1 Recommendations

It is recommended that WSAA members, subject to any specific requirements of the member, accept or authorise the Viega range of PE fittings and tapping valves as detailed in this report, for use with PE100 water supply and sewerage pipelines, provided they are installed in accordance with WSAA Codes and the manufacturer’s requirements.

2 THE APPLICANT

The applicant is Viega Technology GmbH & Co KG.

2.1 The Supplier

Viega Pty Ltd, located in Baulkham Hills NSW, is the Australian based sales and distribution arm of the Company.

2.2 The Manufacturer

Viega Technology GmbH & Co KG is a family owned company with its origins dating back to 1899 in Germany and is now an international market leader in the installation technology sector with over 4000 employees in 10 locations throughout the world. The company manufactures and supplies products for a wide range of sectors including building construction, industrial plant construction, shipbuilding and water and gas utilities.

3 THE PRODUCT

The Viega range of Geopress plastics fittings and tapping valves for use with PE100 pipe consists of tees, elbows, couplings and under pressure tapping valves as detailed in Table 1.

TABLE 1 GEOPRESS PE FITTINGS RANGE

DN	Elbow 90 & 45	Equal Tee	Coupling	Tapping Valve
25	✓	✓	✓	
32	✓	✓	✓	
40	✓	✓	✓	
50	✓	✓	✓	
63	✓	✓	✓	✓
125				✓
180				✓
225				✓

The fittings within the range all utilise a unique press jointing system for leak tight connection to the PE pipe without the need for elastomers. The pipe is pressed on to the support sleeve of the joint with a battery-operated press gun to provide internal sealing and a high tensile connection.

**FIGURE 1 PRESS JOINT**

The Geopress fittings are equipped with a window on the joint to enable verification of the insertion depth of the PE pipe. After pressing, the window is closed and the green clamping ring on the outside of the pipe becomes visible, indicating that the joint was correctly pressed.

**FIGURE 2 GEOPRESS JOINT DETAILS**

The fittings are moulded from Polyamide 12 GF50.

The under pressure tapping valves consist of a tapping band with an integral valve and in-built cutter that allows for under pressure tapping and also provides a subsequent shut off facility for the house service connection. The outlet connection accommodates Geopress connecting pieces that allow for PE service lines to be fitted utilising the press jointing method.



FIGURE 3 GEOPRESS TAPPING VALVE

The plastics fittings and tapping valves are ISO Type 5 certified to AS/NZS 4129:2008 *Fittings for polyethylene (PE) pipes for pressure applications* and the valve component to WMTS 012:2018 *In-line valves for use in plumbing water supply systems*.

4 SCOPE OF THE APPRAISAL

This appraisal includes a range of plastics fittings and tapping valves for use with PE pipes as detailed in Section 3.

5 APPRAISAL CRITERIA

5.1 Quality Assurance Requirements

The WSAA Product Appraisal Technical Advisory Group accepts plastics fittings and tapping bands for use with PE mains manufactured in compliance with AS/NZS 4129:2008 *Fittings for polyethylene (PE) pipes for pressure applications* 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

Viega Geopress plastics fittings and tapping valves have been appraised for compliance with AS/NZS 4129.

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 Specifications are also relevant to this application:

WSA PS 208 – *Plastics Moulded Fittings for Pressure Applications with PE Pipe – Water Supply and Sewerage*

WSA PS 327 *Tapping Bands, Mechanical, for use with Polyethylene (PE) Mains for Pressure Applications – Water Supply.*

Copies of the above Product Specification can be found in Appendix <letter> or downloaded from the WSAA members website.

6 COMPLIANCE WITH APPRAISAL CRITERIA

6.1 Compliance with Quality Assurance Requirements

Viega has submitted the following quality certificates:

- ISO 9001:2015 Certificate of Registration No. 535734 issued to Viega Holding GmbH & Co KG by DQS GmbH.
- AS/NZS 4129:2008 StandardsMark ISO Type 5 Product Certification Licence No. SMK26451 issued to Viega Technology GmbH & Co KG by SAI Global.

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

6.2 Compliance with Performance Requirements

6.2.1 Materials

The fittings and tapping bands are moulded from Polyamide 12 GF50. A test report has been submitted for testing to ISO 9080 that has determined 97.5% LPL of 21.07MPa for the material. This complies with the requirements of ISO 17885 that nominates an MRS of 20 MPa for PA12 GF50.

6.2.2 Performance testing

Test reports completed by MPA NRW have been submitted to demonstrate compliance of the Geopress fittings to the performance requirements of AS/NZS 4129:2008. These tests include a body fitting test and tests on assembled joints to demonstrate compliance to leak-tightness under internal pressure for both short term and long term, leak-tightness under negative pressure, leak-tightness under internal pressure when the joint is subjected to bending and resistance to pull out.

Test reports conducted by Prove Standards & Engineering Pty Ltd have been submitted to demonstrate compliance of the Geopress tapping valves to the requirements of AS/NZS 4129. The report includes tests on assembled saddles to demonstrate compliance to leak-tightness under internal pressure for both short term and long term at nominated various pressures and temperatures, leak-tightness under negative pressure, resistance to pressure during application of a bending moment to the branch, resistance to rotational sliding on the pipe and resistance to axial sliding on the pipe.

Test reports completed by Prove Standards & Engineering Pty Ltd have been submitted to demonstrate compliance of the valve component of the tapping valve to the performance requirements of WMTS 012. These tests include a torque test and hydraulic strength test.

6.2.3 Effect on water

Test reports, completed by Eurofins ams, have been submitted to demonstrate compliance of the Viega plastic fittings and tapping valves to AS/NZS 4020.

7 FITTING INSTRUCTIONS, TRAINING AND INSTALLATION

A comprehensive range of catalogues including Instructions for Use manuals are available directly from Viega.

8 PRODUCT MARKING

Viega fittings and packaging are marked in accordance with the requirements of AS/NZS 4129 as per the following:

- Manufacturer's Name: Viega
- Batch Code: Traceability bar code on each product
- Nominal Size: e.g. d25, d32, d40, d50, d63
- Classification: PN 16
- Material: PA12 GF50
- The standard number: AS/NZS 4129
- Standards Mark symbol – I>>>>I)
- Licence Number: SMK26451

9 PACKAGING AND TRANSPORTATION

The fittings are packed into plastic bags and cardboard boxes.

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

11 WATER AGENCY EXPERIENCE WITH THE PRODUCT OR FIELD TESTING REPORT

A successful installation demonstration of a DN 200 tapping valve was conducted in conjunction with Sydney Water in June 2019.

12 OUTCOMES OF EXPERT PANEL PRODUCT REVIEW

There are no outstanding issues.

13 FUTURE WORKS

No future work has been identified.

14 DISCLAIMER

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

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

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

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

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

Any enquiries regarding this report should be directed to the Program Manager, Carl Radford, Phone: 03 8605 7601 email carl.radford@wsaa.asn.au.

14.1 Issue of Report

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

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

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

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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.

14.3 No Updating

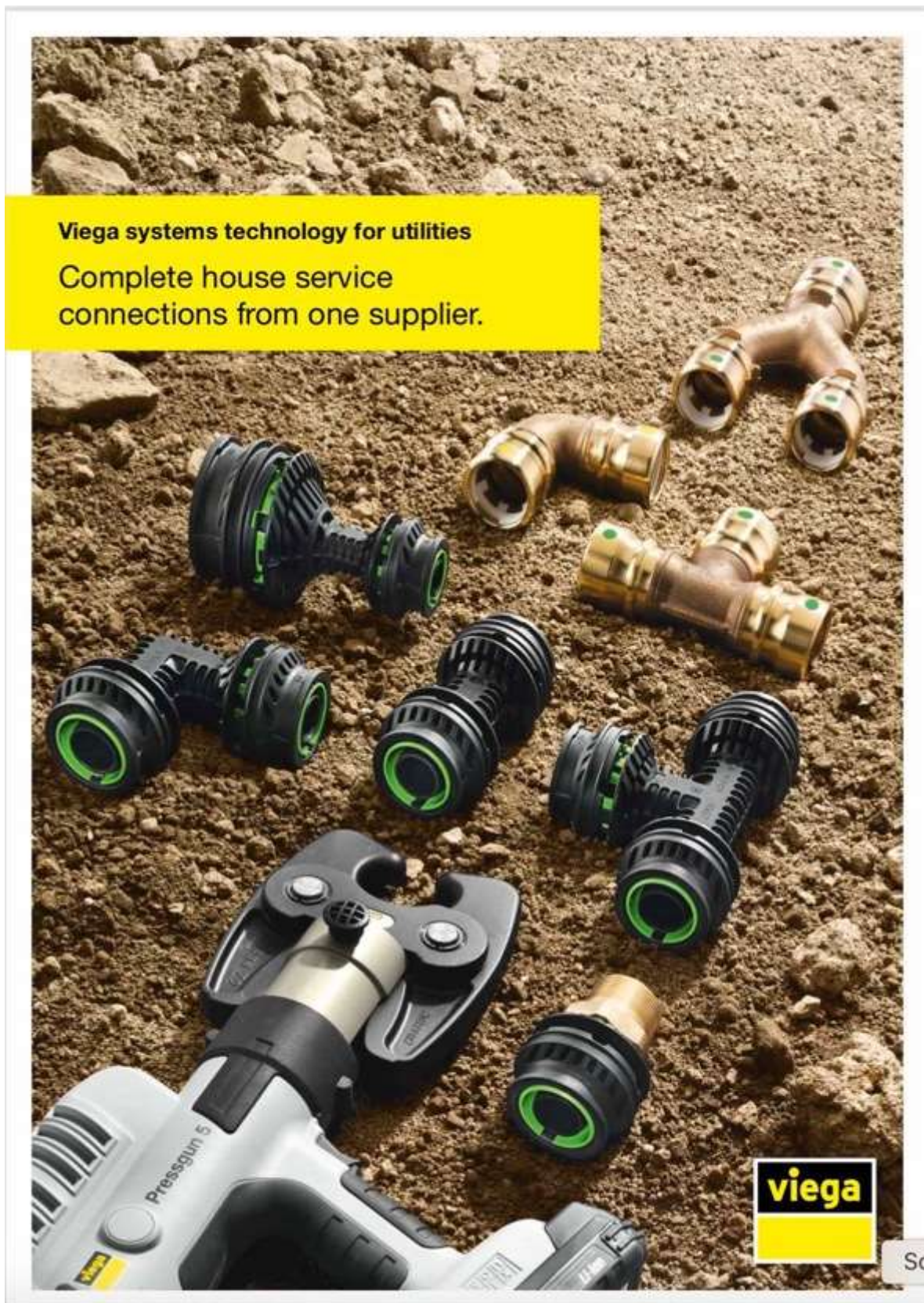
Neither the Publisher(s) nor any person involved in the preparation of this Report [has] [have] any obligation to notify you of any change in the information contained in this Report or of any new information concerning the Publisher(s) or the Product or any other matter.

14.4 No Warranty

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

APPENDIX A – PRODUCT LITERATURE

The available product literature is too voluminous to include in this report. Cover pages for the Geopress Brochure and Instructions for Use for fittings and tapping valves are included in this Appendix. Complete copies are available directly from Viega or from WSAA.



CONTENTS

6

Geopress K underground supply lines:
Something you can count on.

8

Viega Geopress K:
Internal sealing, elastomer-free, plastic – high safety, best supply.



10

Pressing technology: Simple and safer.

12

Viega Geopress tapping valves:
A safe house service connection right from the start.



14

Viega Geopress and Geopress G: Robust, durable and corrosion-resistant.

16

Alternative energies: Bringing the future to you.

18

Viega Maxiplex: The down-to-earth alternative in the ground.



20

Viega Pressgun: Takes seconds to connect what belongs permanently joined.

22

The product range.

Geopress K
Instructions for Use

Year built:
from 12/2015
en INT



Sci



Table of contents

1	About these instructions for use	4
1.1	Target groups	4
1.2	Labelling of notes	4
1.3	About this translated version	5
2	Product information	6
2.1	Standards and regulations	6
2.2	Intended use	9
2.2.1	Areas of use	9
2.2.2	Media	9
2.3	Product description	10
2.3.1	Overview	10
2.3.2	Pipes	10
2.3.3	Press connectors	11
2.3.4	Markings on components	14
2.4	Information for use	15
2.4.1	Corrosion	15
3	Handling	16
3.1	Transport	16
3.2	Storage	16
3.3	Assembly information	17
3.3.1	Mounting instructions	17
3.3.2	Space requirements and intervals	18
3.3.3	Required tools	19
3.4	Assembly	20
3.4.1	Shortening the pipes	20
3.4.2	Deburring the pipes	21
3.4.3	Pressing the connection	22
3.4.4	Leakage test	24
3.5	Disposal	24

Geopress tapping valve with operation shut-off for the HSC

Instructions for Use



Geopress

Model
9690

Year built:
from 03/2009

en_INT





Table of contents

1	About these instructions for use	4
1.1	Target groups	4
1.2	Labelling of notes	4
1.3	About this translated version	5
2	Product information	6
2.1	Standards and regulations	6
2.2	Intended use	8
2.2.1	Areas of use	9
2.2.2	Media	9
2.3	Product description	10
2.3.1	Overview	10
2.3.2	Pipes	10
2.3.3	Tapping valve	12
2.3.4	Marking on tapping valves	13
2.3.5	Compatible connecting pieces for the tapping valve	13
3	Handling	15
3.1	Transport	15
3.2	Storage	15
3.3	Assembly information	15
3.3.1	Mounting instructions	15
3.3.2	Space requirements and intervals	16
3.3.3	Required tools	16
3.4	Assembly	17
3.4.1	Pressing onto the supply line	17
3.4.2	Producing a house service connection	20
3.4.3	Drilling into the supply line	21
3.4.4	Commission the house service connection	21
3.4.5	Control	22
3.4.6	Leakage test	23
3.5	Disposal	23

APPENDIX B - QUALITY CERTIFICATIONS

Copies of the following Quality Certification Certificates are available for downloading from the WSAA Members Website.

TABLE B1 VIEGA HOLDING GmbH & CO KG – MANAGEMENT SYSTEMS

Viega Platz 1 57428 Attendorn Germany	
Quality Systems Standard	ISO 9001:2015
Certification licence no.	535734 QM15
Certifying agency	DQS GmbH
Current date of certification	20 December 2017
Expiry date of certification	20 December 2020

TABLE B2 VIEGA VIEGA TECHNOLOGY GmbH & CO KG – PRODUCT CERTIFICATION

Viega Platz 1 57428 Attendorn Germany	
Product Standard/Spec.	AS/NZS 4129:2008
Certificate No.	SMK26451
Issuing certification body	SAI-Global
First date of certification	25 July 2019
Current date of certification	25 July 2019
Expiry date of certification	24 July 2024



CERTIFICATE



This is to certify that

Viega Holding GmbH & Co. KG

Viega Platz 1
57428 Attendorn
Germany

with the organizational units/sites as listed in the annex

has implemented and maintains a **Quality Management System**.

Scope:

Development, production and sales of sanitary- and heating systems

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

ISO 9001 : 2015

Certificate registration no.	535734 QM15
Valid from	2017-12-20
Valid until	2020-12-19
Date of certification	2017-12-20



DQS GmbH

Stefan Heinieth
Managing Director

Accredited Body: DQS GmbH, August-Schanz-Straße 21, 60433 Frankfurt am Main, Germany

1 / 3



**Annex to certificate
Registration No. 535734 QM15**

Viega Holding GmbH & Co. KG

Viega Platz 1
57428 Attendorn
Germany

Location

Scope

**535737
Viega Deutschland GmbH & Co. KG
Viega Platz 1
57428 Attendorn
Germany**

Sales of sanitary- and heating systems

**535738
Viega CE GmbH & Co. KG
Viega Platz 1
57428 Attendorn
Germany**

Sales of sanitary- and heating systems

**535740
Viega Technology GmbH & Co. KG
Viega Platz 1
57439 Attendorn
Germany**

Sales of sanitary- and heating systems

This annex (edition: 2017-12-20) is only valid in connection with the above-mentioned certificate.



STANDARDSMARK LICENCE

SAI Global hereby grants:

Viega Technology GmbH & Co.KG

Viega Platz 1, Attendorn, Germany

StandardsMark Licence

Manufactured to:

AS/NZS 4129:2008 - Fittings for polyethylene (PE) pipes for pressure applications

"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.

Certificate No:SMK26451

Issued: 27 July 2019

Expires: 24 July 2024

Originally Certified: 25 July 2019

Current Certification: 25 July 2019

Heather Mahon
Head of Global Technical Services
SAI Global Assurance



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*** For details of manufacture, refer to the licensee**

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INFORM. INSPIRE. IMPROVE.

Product Details :

Standard - AS/NZS 4129:2008 Fittings for polyethylene (PE) pipes for pressure applications

Model Identification	Model Name	Brand Name	Product Description	Product Type	Product Application	Size Classification (DN)	Pressure Classification	Joint Type	Colour	Material Designation	Date Endorsed
710057	9715	Viega	Geopress K	Coupling	Water	DN25 (25mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710064	9715	Viega	Geopress K	Coupling	Water	DN32 (32mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710071	9715	Viega	Geopress K	Coupling	Water	DN40 (40mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710088	9715	Viega	Geopress K	Coupling	Water	DN50 (50mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710101	9715	Viega	Geopress K	Coupling	Water	DN63 (63mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710118	97155	Viega	Geopress K	Repair Coupling	Water	DN32 (32mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710125	97155	Viega	Geopress K	Repair Coupling	Water	DN40 (40mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710132	97155	Viega	Geopress K	Repair Coupling	Water	DN50 (50mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710149	97155	Viega	Geopress K	Repair Coupling	Water	DN63 (63mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710156	97152	Viega	Geopress K	Red Coupling	Water	DN32 (32mm x 25mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710163	97152	Viega	Geopress K	Red Coupling	Water	DN40 (40mm x 32mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710170	97152	Viega	Geopress K	Red Coupling	Water	DN50 (50mm x 32mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710187	97152	Viega	Geopress K	Red Coupling	Water	DN50 (50mm x 40mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710194	97152	Viega	Geopress K	Red Coupling	Water	DN63 (63mm x 32mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710200	97152	Viega	Geopress K	Red Coupling	Water	DN63 (63mm x 40mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710217	9711	Viega	Geopress K	Male Adaptor	Water	DN25 (25mm x ½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
710224	9711	Viega	Geopress K	Male Adaptor	Water	DN32 (32mm x ½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
710231	9711	Viega	Geopress K	Male Adaptor	Water	DN32 (32mm x 1")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
710248	9711	Viega	Geopress K	Male Adaptor	Water	DN32 (32mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
710255	9711	Viega	Geopress K	Male Adaptor	Water	DN32 (32mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
710262	9711	Viega	Geopress K	Male Adaptor	Water	DN40 (40mm x 1")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
710279	9711	Viega	Geopress K	Male Adaptor	Water	DN40 (40mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
710286	9711	Viega	Geopress K	Male Adaptor	Water	DN40 (40mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
710293	9711	Viega	Geopress K	Male Adaptor	Water	DN50 (50mm x 1")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
710309	9711	Viega	Geopress K	Male Adaptor	Water	DN50 (50mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
710316	9711	Viega	Geopress K	Male Adaptor	Water	DN50 (50mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
710323	9711	Viega	Geopress K	Male Adaptor	Water	DN63 (63mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019

710330	9711	Viega	Geopress K	Male Adaptor	Water	DN63 (63mm x 2")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
710347	9712	Viega	Geopress K	Female Adaptor	Water	DN25 (25mm x ¾")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
710354	9712	Viega	Geopress K	Female Adaptor	Water	DN32 (32mm x 1")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
710381	9712	Viega	Geopress K	Female Adaptor	Water	DN40 (40mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
710378	9712	Viega	Geopress K	Female Adaptor	Water	DN50 (50mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
710385	9712	Viega	Geopress K	Female Adaptor	Water	DN50 (50mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
710392	9712	Viega	Geopress K	Female Adaptor	Water	DN63 (63mm x 2")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
710507	97152	Viega	Geopress K	Red Coupling	Water	DN63 (63mm X 50mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710699	9756	Viega	Geopress K	End Cap	Water	DN25 (25mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710705	9756	Viega	Geopress K	End Cap	Water	DN32 (32mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710712	9756	Viega	Geopress K	End Cap	Water	DN40 (40mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710729	9756	Viega	Geopress K	End Cap	Water	DN50 (50mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710736	9756	Viega	Geopress K	End Cap	Water	DN63 (63mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710873	9716	Viega	Geopress K	Elbow 90	Water	DN25 (25mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710880	9716	Viega	Geopress K	Elbow 90	Water	DN32 (32mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710897	9716	Viega	Geopress K	Elbow 90	Water	DN40 (40mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710903	9716	Viega	Geopress K	Elbow 90	Water	DN50 (50mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710910	9716	Viega	Geopress K	Elbow 90	Water	DN63 (63mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
710927	9714	Viega	Geopress K	Male Elbow 90	Water	DN25 (25mm x ¾")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
710934	9714	Viega	Geopress K	Male Elbow 90	Water	DN32 (32mm x ¾")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
710941	9714	Viega	Geopress K	Male Elbow 90	Water	DN32 (32mm x 1")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
710958	9714	Viega	Geopress K	Male Elbow 90	Water	DN32 (32mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
710965	9714	Viega	Geopress K	Male Elbow 90	Water	DN40 (40mm x 1")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
710972	9714	Viega	Geopress K	Male Elbow 90	Water	DN40 (40mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
710989	9714	Viega	Geopress K	Male Elbow 90	Water	DN40 (40mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
710996	9714	Viega	Geopress K	Male Elbow 90	Water	DN50 (50mm x 1")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
711009	9714	Viega	Geopress K	Male Elbow 90	Water	DN50 (50mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
711016	9714	Viega	Geopress K	Male Elbow 90	Water	DN50 (50mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019

711023	9714	Viega	Geopress K	Male Elbow 90	Water	DN63 (63mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
711030	9714	Viega	Geopress K	Male Elbow 90	Water	DN63 (63mm x 2")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
711047	97142	Viega	Geopress K	Female Elbow 90	Water	DN32 (32mm x 1")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
711054	97142	Viega	Geopress K	Female Elbow 90	Water	DN40 (40mm x 1")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
711061	97142	Viega	Geopress K	Female Elbow 90	Water	DN40 (40mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
711078	97142	Viega	Geopress K	Female Elbow 90	Water	DN50 (50mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
711085	97142	Viega	Geopress K	Female Elbow 90	Water	DN63 (63mm x 2")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
711092	9726	Viega	Geopress K	Elbow 45	Water	DN32 (32mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
711108	9726	Viega	Geopress K	Elbow 45	Water	DN40 (40mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
711115	9726	Viega	Geopress K	Elbow 45	Water	DN50 (50mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
711122	9726	Viega	Geopress K	Elbow 45	Water	DN63 (63mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
711138	97262	Viega	Geopress K	Male Elbow 45	Water	DN32 (32mm x 1")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
711146	97262	Viega	Geopress K	Male Elbow 45	Water	DN40 (40mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
711153	97262	Viega	Geopress K	Male Elbow 45	Water	DN50 (50mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
711160	97262	Viega	Geopress K	Male Elbow 45	Water	DN63 (63mm x 2")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
711269	9718	Viega	Geopress K	Tee Equal	Water	DN25 (25mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
711276	9718	Viega	Geopress K	Tee Equal	Water	DN32 (32mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
711283	9718	Viega	Geopress K	Tee Equal	Water	DN40 (40mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
711290	9718	Viega	Geopress K	Tee Equal	Water	DN50 (50mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
711306	9718	Viega	Geopress K	Tee Equal	Water	DN63 (63mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
711313	97171	Viega	Geopress K	Male Tee	Water	DN32 (32mm x ½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
711320	97171	Viega	Geopress K	Male Tee	Water	DN40 (40mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
711337	97171	Viega	Geopress K	Male Tee	Water	DN50 (50mm x ½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
711344	97171	Viega	Geopress K	Male Tee	Water	DN50 (50mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
711351	97171	Viega	Geopress K	Male Tee	Water	DN63 (63mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
767495	9794TW	Viega	Geopress K	Valve Adaptor 90 Elbow	Water	DN40 (40mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
767501	9794TW	Viega	Geopress K	Valve Adaptor 90 Elbow	Water	DN50 (50mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
767518	9794TW	Viega	Geopress K	Valve Adaptor 90 Elbow	Water	DN63 (63mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
767525	97941TW	Viega	Geopress K	Valve Adaptor 45 Elbow	Water	DN32 (32mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
767532	97941TW	Viega	Geopress K	Valve Adaptor 45 Elbow	Water	DN40 (40mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019

767549	97941TW	Viega	Geopress K	Valve Adaptor 45 Elbow	Water	DN50 (50mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
768140	9793TW	Viega	Geopress K	Valve Adaptor	Water	DN32 (32mm)	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
768157	9793TW	Viega	Geopress K	Valve Adaptor	Water	DN40 (40mm)	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
768164	9793TW	Viega	Geopress K	Valve Adaptor	Water	DN50 (50mm)	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
768171	9793TW	Viega	Geopress K	Valve Adaptor	Water	DN63 (63mm)	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
768188	9794TW	Viega	Geopress K	Valve Adaptor 90 Elbow	Water	DN32 (32mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
768256	97941TW	Viega	Geopress K	Valve Adaptor 45 Elbow	Water	DN63 (63mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
768263	97201TW	Viega	Geopress K	Male Elbow 90 R-Thread	Water	DN32 (32mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
768270	97201TW	Viega	Geopress K	Male Elbow 90 R-Thread	Water	DN40 (40mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
768287	97201TW	Viega	Geopress K	Male Elbow 90 R-Thread	Water	DN50 (50mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
768294	97201TW	Viega	Geopress K	Male Elbow 90 R-Thread	Water	DN63 (63mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
768300	9721TW	Viega	Geopress K	Male adaptor with G thread	Water	DN32 (32mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
768317	9721TW	Viega	Geopress K	Male adaptor with G thread	Water	DN40 (40mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
768324	9721TW	Viega	Geopress K	Male adaptor with G thread	Water	DN50 (50mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
768331	9721TW	Viega	Geopress K	Male adaptor with G thread	Water	DN63 (63mm x 1½")	PN 16	Mechanical	Black	Polyamide & Zero Lead Bronze	24 Jul 2019
772437	9690TW	Viega	Geopress K	Tapping Valve	Water	DN63 (63mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
772444	9690TW	Viega	Geopress K	Tapping Valve	Water	DN90 (90mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
772451	9690TW	Viega	Geopress K	Tapping Valve	Water	DN110 (110mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
772468	9690TW	Viega	Geopress K	Tapping Valve	Water	DN125 (125mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
772475	9690TW	Viega	Geopress K	Tapping Valve	Water	DN140 (140mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
772482	9690TW	Viega	Geopress K	Tapping Valve	Water	DN160 (160mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
772499	9690TW	Viega	Geopress K	Tapping Valve	Water	DN180 (180mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
772505	9690TW	Viega	Geopress K	Tapping Valve	Water	DN200 (200mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019
772512	9690TW	Viega	Geopress K	Tapping Valve	Water	DN225 (225mm)	PN 16	Mechanical	Black	Polyamide	24 Jul 2019

APPENDIX C - WSA PRODUCT SPECIFICATION

WATER SERVICES ASSOCIATION of Australia

PRODUCT SPECIFICATION

WSA PS - 208 PLASTICS MOULDED FITTINGS FOR PRESSURE APPLICATIONS WITH PE PIPE – WATER SUPPLY AND SEWERAGE

208.1 SCOPE

This specification covers plastics¹ moulded

- (a) electrofusion fittings;
- (b) mechanical compression joint fittings;
- (c) elongated spigot fittings for butt fusion and for use with electrofusion socketed fittings; and
- (d) short² spigot fittings for butt fusion
in pressure applications with PE pipes in water supply³ and sewerage.

208.2 REQUIREMENTS

- (a) Plastics¹ moulded material of the fitting body⁴ shall comply with AS/NZS 4129:2008/Amdt 1:2013.
- (b) Mechanical joint elastomeric seals shall be EPDM complying with AS 1646:2007 and AS 681.1:2008 (EN 681-1:1996).
- (c) Joint seals, flange gaskets⁵ and jointing lubricant shall comply with AS/NZS 4020:2018.

208.3 QUALITY ASSURANCE

- (a) Plastics moulded fittings shall have product certification (ISO Type 5) to AS/NZS 4129:2008/Amdt 1:2013.
- (b) Elastomeric joint seals shall have product certification (ISO Type 5) to AS 1646:2007 and AS 681.1:2008 (EN 681-1:1996).
- (c) Flange gaskets shall have certificates of compliance to WSA 109:2011.
- (d) All products shall be marked in accordance with the conformity assessment body's requirements.

208.4 AGENCY OR PROJECT SPECIFIC REQUIREMENTS

Pressure Class ⁶ , PN	
Type of fitting e.g. mechanical or electrofusion	
Fitting types (configurations)	
Flange standard (e.g. AS/NZS 4331.1:1995 or AS/NZS 4087:2011/Amdt 1:2012 or AS ISO 9624:2008)	
Alternative elastomeric material for joint seals	

NOTES:

- 1 Plastics moulded material of the fitting body shall be in accordance with Table 1.1 of AS/NZS 4129:2008/Amdt 1:2013.
- 2 The dimensions of short spigot fittings for butt fusion shall conform to the requirements given in Table 3 (see Figure 2) in EN 12201-3:2001+A1:2012.

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Issue: 06

October 2018

Doc Name: Product Specifications for Products & Materials

Page 1 of 2

WATER SERVICES ASSOCIATION of Australia

- 3 Includes water supply and recycled water supply.
- 4 All fittings to AS/NZS 4129:2008/Amdt 1:2013 for applications other than fuel gas are required to comply with AS/NZS 4020:2018. Fittings may be used for drinking water, recycled water and sewerage pipework. Individual colour identification for each application is not required.
- 5 Flange gaskets and O-rings should be supplied to [WSA PS-312](#).
- 6 Pressure Class and type of fitting shall be as specified in the Project Specification or on the Design Drawings.

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Issue: 06

October 2018

Doc Name: Product Specifications for Products & Materials

Page 2 of 2

WATER SERVICES ASSOCIATION of Australia**PRODUCT SPECIFICATION****WSA PS - 327 TAPPING BANDS, MECHANICAL, FOR USE WITH POLYETHYLENE (PE) MAINS FOR PRESSURE APPLICATIONS – WATER SUPPLY****327.1 SCOPE**

This specification covers mechanical tapping bands for pressure applications in connecting property services to PE water reticulation mains¹.

327.2 REQUIREMENTS

- (a) Tapping bands shall comply with AS/NZS 4129:2008/Amdt 1:2013.

327.3 QUALITY ASSURANCE

- (a) Tapping bands shall have product certification (ISO Type 5) to AS/NZS 4129:2008/Amdt 1:2013.
- (b) All products shall be marked in accordance with the conformity assessment body's requirements.

327.4 AGENCY OR PROJECT SPECIFIC REQUIREMENTS

Nominal pipe size, DN, and off-take size, mm	
Pressure Class, PN	
Series RP or Series RC internal outlet thread ²	

NOTES:

- 1 Includes drinking water and recycled water supply. Colour differentiation is not required.
- 2 Where a tapered RC external threaded fitting is to be screwed into a plastic bodied tapping band, a tapered RC internal outlet thread is recommended.

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Issue: 06

October 2018

Doc Name: Product Specifications for Products & Materials

Page 1 of 1

APPENDIX D - SUPPLIER CONTACTS

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