

VINIDEX PTY LTD

PRODUCT APPRAISAL REPORT PA 1515 Issue 5

FRIALEN® PE100 Electrofusion Fittings for Pressure Applications

AS/NZS 4129:2020 Fittings for polyethylene (PE) pipes for pressure applications

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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 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

Vinidex Pty Ltd is an Australian manufacturer of thermoplastic pipeline systems for building, infrastructure, irrigation and rural, mining and industrial, gas and energy applications with over 60 years of experience.

The range of FRIALEN® electrofusion PE fittings is manufactured by Aliaxis Deutschland GmbH in Mannheim Germany (previously Friatec GmbH) and distributed throughout Australia by Vinidex.

This Appraisal is for a range of FRIALEN PE100 electrofusion fittings manufactured to AS/NZS 4129:2020 Fittings for polyethylene (PE) pipes for pressure applications.

This Issue 5 is a replacement for the previous version of the appraisal which was due to expire on 26th July 2025.

The FRIALEN electrofusion fittings range includes:

- Couplers, reducers, tees, elbows and caps in sizes DN 20 to DN 630 depending on the product.
- Branch saddles and tapping tees in sizes DN 40 to DN 315, depending on the product.

The fittings are rated as PN10, PN16 or PN25, depending on the product.

Both Vinidex and Aliaxis Deutschland hold ISO 9001:2015 Quality Management System Licences.

The PE fittings have ISO Type 5 StandardsMark Product Certification to AS/NZS 4129:2020 *Fittings for polyethylene (PE) pipes.*

This Appraisal has determined that Aliaxis FRIALEN PE100 electrofusion fittings as detailed in this report, meet the requirements of WSA PS-208 Plastics Fittings for Pressure Applications with PE Pipe – Drinking Water, Non-Drinking Water Supply and Sewerage and WSA PS-329 Tapping Saddles, Electrofusion, for Use with Polyethylene (PE) Mains for Pressure Applications - Drinking Water, Non-Drinking Water Supply and Sewerage and are considered as 'fit-for-purpose'.

1.1 Recommendations

It is recommended that WSAA members, subject to any specific requirements of the member, accept or authorise the Aliaxis FRIALEN range of PE100 electrofusion fittings, as detailed in this report, for use in water supply and sewerage networks, provided pipeline design and installation is in accordance with the relevant WSAA Code and the manufacturer's installation requirements.

2 THE APPLICANT

The Applicant is Vinidex Pty Ltd.

2.1 The Supplier

Vinidex Pty Ltd is an Australian manufacturer of thermoplastic pipeline systems for building, infrastructure, irrigation and rural, mining and industrial, gas and energy applications with over 60 years' experience. Vinidex has factories and distribution centres located in all states of Australia.

Aliaxis Group acquired Vinidex in 2014.

2.2 The Manufacturer

Aliaxis Deutschland GmbH (previously Friatec GmbH) located in Mannheim, Germany is a specialist manufacturer of products made of corrosion and abrasion resistant materials including plastic products and industrial ceramics. The company was founded in 1863 as a brickyard, before developing its first innovation, chemical stoneware, in 1888. In the mid 1900's Aliaxis Deutschland began processing plastics. Aliaxis Deutschland has been a member of the Aliaxis Group since 2003.

Aliaxis Group is a leading global manufacturer and distributor of primarily plastic fluid handling systems used in residential, commercial, industrial and public infrastructure construction. Some of its well-known brands include Marley, Philmac, Dux and Ipex.

3 THE PRODUCT

This Appraisal is for a range of FRIALEN PE100 electrofusion fittings manufactured to AS/NZS 4129:2020 Fittings for polyethylene (PE) pipes for pressure applications.

The electrofusion fittings are suitable for use with polyethylene (PE) pipes manufactured in accordance with AS/NZS 4130 for the conveyance of drinking water, non-drinking water and sewage in buried and above ground applications.

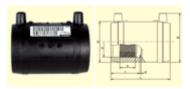
The FRIALEN electrofusion fittings range includes:

- Couplers, reducers, tees, elbows and caps in sizes DN 20 to DN 630 depending on the product.
- Branch saddles and tapping tees in sizes DN 40 to DN 315, depending on the product.

The fittings are rated as PN10, PN16 or PN25, depending on the product.

A summary of the fittings included in this Appraisal is shown below. Further details are included in Appendix A.

Electrofusion Couplers



FRIALEN electrofusion couplers are available in SDR17, SDR11 and SDR7.4, in sizes DN 20 to DN 630, with and without centre stop.

Electrofusion Reducers



FRIALEN electrofusion reducing couplers are available in SDR11, in sizes DN 32 x DN 20 to DN 160 x DN 110.

Electrofusion Tees



FRIALEN electrofusion equal tees are available in SDR11, in sizes DN 32 to DN 225.

Electrofusion Elbows



FRIALEN electrofusion elbows are available in SDR11, in sizes DN 25 to DN 225. Deflection angles of 90°, 45°, 30° and 11° are available.

Electrofusion Caps



FRIALEN electrofusion end caps are available in SDR11, in sizes DN 20 to DN 225.

Electrofusion Saddles



FRIALEN electrofusion branch saddles are available in SDR11, in sizes DN 63 x DN 32 to DN 900 x DN 160. Underclamp and top loading options are available.

Electrofusion Tapping Tees



FRIALEN electrofusion tapping tees are available in SDR11, in sizes DN 40 x DN 20 to DN 225 x DN 63, with underclamp. Top loading options are available for specialist installations.

The FRIALEN range of electrofusion fittings are nominated to have several unique features:

(a) Embedded heating coil for improved fusion:

FRIALEN safety fittings are designed with embedded heating coils. FRIALEN claims consistent heat transfer is provided during fusion and optimum homogenous connection of the PE materials. Other advantages claimed include:

- fusion result is not affected by oxidised layer in the fitting
- symmetrical fusion ellipse
- excellent and fast bridging of the gap between pipe and fitting
- (b) Longer fusion zone for more security:

FRIALEN safety fittings have a longer fusion zone that exceeds the requirements of the relevant Australian and European Standards. This should allow a considerably greater solidity and reliability of the fusion joint. Other advantages include:

- · enlarged force transferring area
- greater installation safety
- higher long-term solidity of the joint
- (c) Long insertion depth for a perfect result:

The long insertion depth of the pipe ends inside the coupler contributes considerably to the reliability and safety of pipe connections. FRIALEN safety fittings ensure that:

- angle deviations are safely absorbed
- bending stresses are better compensated
- melt pressures are evenly built up

Electrofusion FIXBLOC units are used to provide thrust restraint and can replace traditional more expensive methods. Each unit restrains up to 4000 kg of axial force and multiple units can be

used around the pipe surface to multiply the amount of thrust which can be restrained. These products are not included within this Appraisal. Further information is available at: https://www.aliaxis.de/website/downloads/friatec/en/prospekte/fixbloc-ds-friatec.pdf or directly from Vinidex.

4 SCOPE OF THE APPRAISAL

The scope of this appraisal includes a range of FRIALEN PE100 electrofusion fittings, as described in Section 3 and included in the ISO Type 5 StandardsMark Product Schedule in Appendix B.

5 APPRAISAL CRITERIA

5.1 Quality Assurance Requirements

The WSAA Product Appraisal Technical Advisory Group accepts PE electrofusion fittings manufactured in compliance with AS/NZS 4129:2020 *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

The FRIALEN range of PE100 electrofusion fittings has been appraised for compliance with AS/NZS 4129:2020.

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 Fittings for Pressure Applications with PE Pipe Drinking Water, Non-Drinking Water Supply and Sewerage.
- WSA PS-329 Tapping Saddles, Electrofusion, for Use with Polyethylene (PE) Mains for Pressure Applications - Drinking Water, Non-Drinking Water Supply and Sewerage

A copy of the product specification is available at the following link:

https://wsaa.asn.au/Web/web/shop/ShopSearch.aspx?category=PRODSPECS

6 COMPLIANCE WITH APPRAISAL CRITERIA

6.1 Compliance with Quality Assurance Requirements

Vinidex has submitted the following quality certificates:

- ISO 9001:2015 Certificate of Registration No. QEC0570 issued to Vinidex Pty Ltd by Intertek SAI-Global.
- ISO 9001:2015 Certificate of Registration No. 01 100 060216 issued to Aliaxis Deutschland GmbH by TUV Rheinland.
- AS/NZS 4129:2020 ISO Type 5 StandardsMark Product Certification Licence No. SMKP20677 issued to Aliaxis Deutschland GmbH by Intertek SAI-Global.

Copies of the quality assurance and product certification licences have been included in Appendix B and are also available from WSAA.

6.2 Compliance with performance requirements

6.2.1 Materials

Vinidex has advised that Ineos Eltex TUB 121 N6000 is used for the manufacture of the FRIALEN range of fittings.

Eltex TUB 121 N6000 is listed in POP004A as compliant with AS/NZS 4131.

6.2.2 Type testing

Type test reports were submitted for the original appraisal to demonstrate compliance with the requirements of AS/NZS 4129:2008. Retesting is not required.

6.2.3 Suitability for contact with drinking water

Eltex TUB 121 N6000 is listed in POP004A with current certification to AS/NZS 4020:2018.

It is the responsibility of the pipe manufacturer to ensure that PE compounds are covered by current AS/NZS 4020 test reports.

6.2.4 Stainless steel inserts

FRIALEN transition fittings with stainless steel inserts are not included in this appraisal.

6.2.5 Zinc plated steel inserts

FRIALEN transition fittings with zinc plated steel inserts are for gas only and not included in this appraisal.

6.2.6 Brass inserts

FRIALEN UAN and UAM transition fittings and DAA cutters are made from ECO BRASS which is inherently dezincification resistant. ECO BRASS is a lead-free brass alloy developed by and patented by Mitsubishi Shindoh. The website states that ECO BRASS eliminates the problems of stress corrosion cracking and dezincification corrosion and is recommended for water supply devices such as faucets, valves, fittings etc.

A dezincification test was completed on this material for the original appraisal and was deemed to comply.

6.2.7 Screw threads

FRIALEN transition fittings with brass inserts have pipe threads in compliance ISO 7.1. The ISO 7.1 specification for sealing pipe threads requires male threads to be tapered and female threads to be parallel.

7 FITTING INSTRUCTIONS, TRAINING AND INSTALLATION

Satisfactory completion of a recognised PE pipeline installation training program is a recommended pre-requisite for all PE pipeline installers and supervisors.

The FRIALEN Electrofusion System Brochure and FRIALEN Assembly Instructions are available from Vinidex or WSAA in electronic form. These documents describe electrofusion welding and welding systems for the FRIALEN electrofusion fittings.

8 PRODUCT MARKING

The FRIALEN range of electrofusion fittings are marked in accordance with the requirements of AS/NZS 4129:2020 as follows:

- Manufacturers Name or Trademark: FRIALEN
- · Date or Batch Code:
- Nominal size: e.g. DN 160
- Material grade and type: PE100

· Classification: e.g. SDR 11

Number of the Standard: AS/NZS 4129

StandardsMark symbol and licence number: (I>>>>I) SMKP20677

The information is marked on the fitting or included on a label attached to the fitting or the packaging.

Information relative to the fusion jointing conditions is accessed via a barcode attached to the fitting.

9 PACKAGING AND TRANSPORTATION

FRIALEN electrofusion fittings are packed in individual plastic bags and labelled as described in Section 8.

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

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

While electrofusion fittings are a mature and widely installed product, the Australian water industry has had varied experience with the performance of these fittings.

Many Water Agencies are cautious about the use of electrofusion fittings due to the lack of confidence in the skill of installers. Due to the history of erratic installation quality, it is imperative that a pre-requisite for all PE pipeline installers includes satisfactory completion of a recognised PE pipeline installation training program. In addition, it is recommended that for PE pipelines where electrofusion fittings are used, an attentive site supervision regime be adopted using qualified, experienced supervisors until the individual installer or contractor can demonstrate competence in all aspects of installation.

Notwithstanding the quality of installation concerns, it is considered that nothing new can be learned from a field installation trial.

12 DISCUSSION

Electrofusion jointing of PE pipelines offers a permanently sealed and jointed system provided the electrofusion process is carried out correctly. The electrofusion jointed PE pipeline has the potential to have life expectancy equal to and in some cases well beyond other pipeline materials and jointing systems. The PE material is corrosion resistant and correctly made joints are permanently fused to provide a high level of joint integrity against leakage and/or infiltration over the long-term. Similar to other plastic pipe systems, PE is susceptible to fatigue from cyclic pressure changes and additional design considerations must be made if used in a pumped pipeline. Refer to WSAA Technical Note TN4 and design material available from Vinidex for further information.

FRIAMAT fusion machines are available from Vinidex for electrofusion welding of FRIALEN fittings, however these machines are not included in the Scope of this Appraisal. The FRIAMAT fusion machines are suitable for connection to fittings that have 4 mm pins. The machines read the barcode attached to the fitting in order to get the correct fusion parameters, supervises all functions fully automatically during the welding process and stores the data. All reputable electrofusion fitting brands are supplied with a barcode sticker which conforms to an international standard (ISO 12176.4:2003) that can be read by the FRIAMAT machine. Any standard 5Kva generator will be adequate to provide enough power to weld all sizes of fittings.

PE pipelines are susceptible to permeation of specific organic chemicals (as are other pipeline systems) and care must be exercised if designing for installation in contaminated

ground and/or brownfield sites. Further advice is available from Vinidex regarding such installations.

13 OUTCOMES OF EXPERT PANEL PRODUCT REVIEW

No issues have been raised.

14 FUTURE WORKS

There are no future work items.

15 DISCLAIMER

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

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

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

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

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

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

15.1 Issue of Report

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

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

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

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

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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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

Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
110	Slide-over coupler	AM SDR17	10	17	680001	
160	Slide-over coupler	AM SDR17	10	17	680002	
180	Slide-over coupler	AM SDR17	10	17	680003	
200	Slide-over coupler	AM SDR17	10	17	680004	
225	Slide-over coupler	AM SDR17	10	17	680005	
250	Slide-over coupler	AM SDR17	10	17	680006	
280	Slide-over coupler	AM SDR17	10	17	680007	
315	Slide-over coupler	AM SDR17	10	17	680008	
355	Slide-over coupler	AM SDR17	10	17	680009	
400	Slide-over coupler	AM SDR17	10	17	680010	
450	Slide-over coupler	AM SDR17	10	17	680011	
500	Slide-over coupler	AM SDR17	10	17	680012	
125	Slide-over coupler	AM SDR17	10	17	680013	
560	Slide-over coupler	AM SDR17	10	17	680018	
630	Slide-over coupler	AM SDR17	10	17	680019	

Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
40X20	Pressure Tapping Tee	DAA	16	11	612630	88963
40x25	Pressure Tapping Tee	DAA	16	11	616473	
40x32	Pressure Tapping Tee	DAA	16	11	616474	
50x20	Pressure Tapping Tee	DAA	16	11	616475	
50x25	Pressure Tapping Tee	DAA	16	11	612702	88966
50x32	Pressure Tapping Tee	DAA	16	11	615080	88967
63x20	Pressure Tapping Tee	DAA	16	11	612631	88968
63x25	Pressure Tapping Tee	DAA	16	11	612633	88969
63x32	Pressure Tapping Tee	DAA	16	11	612632	88970
63x40	Pressure Tapping Tee	DAA	16	11	616472	
63x63	Pressure Tapping Tee	DAA	16	11	616334	
75x32	Pressure Tapping Tee	DAA	16	11	616482	
90x20	Pressure Tapping Tee	DAA	16	11	616483	
90x25	Pressure Tapping Tee	DAA	16	11	616484	
90x32	Pressure Tapping Tee	DAA	16	11	612634	88981
90x40	Pressure Tapping Tee	DAA	16	11	615656	88982
90x50	Pressure Tapping Tee	DAA	16	11	616476	1,000,000,000
90x63	Pressure Tapping Tee	DAA	16	11	612701	88984
110x20	Pressure Tapping Tee	DAA	16	11	616487	
110x25	Pressure Tapping Tee	DAA	16	11	616488	
110x32	Pressure Tapping Tee	DAA	16	11	612637	88986
110x40	Pressure Tapping Tee	DAA	16	11	615662	88987
110x50	Pressure Tapping Tee	DAA	16	11	616477	
110x63	Pressure Tapping Tee	DAA	16	11	612624	88989
125x20	Pressure Tapping Tee	DAA	16	11	616491	
125x25	Pressure Tapping Tee	DAA	16	11	616492	
125x32	Pressure Tapping Tee	DAA	16	11	612649	88991
125x40	Pressure Tapping Tee	DAA	16	11	615668	
125x50	Pressure Tapping Tee	DAA	16	11	616478	
125x63	Pressure Tapping Tee	DAA	16	11	612309	88994

125x50	Pressure Tapping Tee	DAA	16	11	616478	
125x63	Pressure Tapping Tee	DAA	16	11	612309	88994
140x32	Pressure Tapping Tee	DAA	16	11	616495	
140x63	Pressure Tapping Tee	DAA	16	11	616496	
160x20	Pressure Tapping Tee	DAA	16	11	616497	
160x25	Pressure Tapping Tee	DAA	16	11	616498	
160x32	Pressure Tapping Tee	DAA	16	11	612641	89001
160x40	Pressure Tapping Tee	DAA	16	11	615675	
160x50	Pressure Tapping Tee	DAA	16	11	616480	
160x63	Pressure Tapping Tee	DAA	16	11	612650	89004
180x20	Pressure Tapping Tee	DAA	16	11	616501	
180x25	Pressure Tapping Tee	DAA	16	11	616502	
180x32	Pressure Tapping Tee	DAA	16	11	612651	89006
180x50	Pressure Tapping Tee	DAA	16	11	616481	
180x63	Pressure Tapping Tee	DAA	16	11	612652	89009
200x32	Pressure Tapping Tee	DAA	16	11	612654	89011
200x63	Pressure Tapping Tee	DAA	16	11	612659	89014
225x32	Pressure Tapping Tee	DAA	16	11	612657	89016
225x50	Pressure Tapping Tee	DAA	16	11	616486	
225x63	Pressure Tapping Tee	DAA	16	11	612655	89019

PRESSURE TAPPING TEE TOP LOADING SDR11 PE100							
Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code	
250-400x63	Pressure Tapping Tee Top Loading for SDR 17 pipes	DAA TL	16	11	615339		

PRESSURE TAP	PING TEE PARALLEL DOME SDR11 PE100					
Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
63x32	Pressure Tapping Tee Parallel Dome	DAP	16	11	616042	
110x32	Pressure Tapping Tee Parallel Dome	DAP	16	11	615581	
110x50	Pressure Tapping Tee Parallel Dome	DAP	16	11	615606	
125x32	Pressure Tapping Tee Parallel Dome	DAP	16	11	615711	
125x50	Pressure Tapping Tee Parallel Dome	DAP	16	11	615712	
160x32	Pressure Tapping Tee Parallel Dome	DAP	16	11	615713	
160x50	Pressure Tapping Tee Parallel Dome	DAP	16	11	615714	
180x32	Pressure Tapping Tee Parallel Dome	DAP	16	11	615715	
180x50	Pressure Tapping Tee Parallel Dome	DAP	16	11	615716	
225x32	Pressure Tapping Tee Parallel Dome	DAP	16	11	615717	
225x50	Pressure Tapping Tee Parallel Dome	DAP	16	11	615718	

Cina	Braduct Description	Model	PN Water	CDD	Aliaxis Code	Miniday Code
Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
50x32	Pressure Tapping Valve	DAV	16	11	617024	
63x32	Pressure Tapping Valve	DAV	16	11	617025	
63x40	Pressure Tapping Valve	DAV	16	11	617026	
63x63	Pressure Tapping Valve	DAV	16	11	616952	
75x32	Pressure Tapping Valve	DAV	16	11	617027	
90x32	Pressure Tapping Valve	DAV	16	11	616960	
90x40	Pressure Tapping Valve	DAV	16	11	616961	
90x50	Pressure Tapping Valve	DAV	16	11	616962	
90x63	Pressure Tapping Valve	DAV	16	11	616963	
110x32	Pressure Tapping Valve	DAV	16	11	616964	
110x40	Pressure Tapping Valve	DAV	16	11	616965	
110x50	Pressure Tapping Valve	DAV	16	11	616966	
110x63	Pressure Tapping Valve	DAV	16	11	616967	

125x50	Pressure Tapping Valve	DAV	16	11	616970	
125x63	Pressure Tapping Valve	DAV	16	11	616971	
140x32	Pressure Tapping Valve	DAV	16	11	616972	
140x63	Pressure Tapping Valve	DAV	16	11	616973	
160x32	Pressure Tapping Valve	DAV	16	11	616974	
160x40	Pressure Tapping Valve	DAV	16	11	616975	
160x50	Pressure Tapping Valve	DAV	16	11	616976	
160x63	Pressure Tapping Valve	DAV	16	11	616977	
180x32	Pressure Tapping Valve	DAV	16	11	616978	
180x40	Pressure Tapping Valve	DAV	16	11	616979	
180x50	Pressure Tapping Valve	DAV	16	11	616980	
180x63	Pressure Tapping Valve	DAV	16	11	616981	
200x32	Pressure Tapping Valve	DAV	16	11	616982	
200x63	Pressure Tapping Valve	DAV	16	11	616984	
225x32	Pressure Tapping Valve	DAV	16	11	616985	
225x40	Pressure Tapping Valve	DAV	16	11	616986	
225x50	Pressure Tapping Valve	DAV	16	11	616987	
225x63	Pressure Tapping Valve	DAV	16	11	616988	

Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
250-315x63	Pressure Tapping Valve Top Loading	DAV TL	16	11	616464	
355-400x63	Pressure Tapping Valve Top Loading	DAV TL	16	11	616465	
250-315/63	Pressure tapping valve Top- Loading with extra long outlet spigot	DAV-TL	16	11	616464	
355-400/63	Pressure tapping valve Top- Loading with extra long outlet spigot	DAV-TL	16	11	616465	

P FOR PRESSURE TEES SDR11 PE100								
Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code		
50	Cap for Pressure Tapping Tees	DK	16	11	612310			

Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
63	Full Faced Flange (Spigot Fitting)	EFL	16	11	615417	
90	Full Faced Flange (Spigot Fitting)	EFL	16	11	615418	
110	Full Faced Flange (Spigot Fitting)	EFL	16	11	615419	
160	Full Faced Flange (Spigot Fitting)	EFL	16	11	615421	
125	Full Faced Flange (Spigot Fitting)	EFL	16	11	615605	
225	Full Faced Flange (Spigot Fitting)	EFL	16	11	615607	
180	Full Faced Flange (Spigot Fitting)	EFL	16	11	615927	

ANGE REDUCER	SDR11 PE100					Angelia de la composición dela composición de la composición de la composición de la composición de la composición dela composición de la composición dela composición dela composición de la composición dela composición de la composición dela composición dela compo
Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
110	Flange Reducer	FLR	16	11	616065	
160	Flange Reducer	FLR	16	11	616241	
225	Flange Reducer	FLR	16	11	616242	

Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
50	Long Coupler	FRIALONG	16	11	615608	88444
32	Long Coupler	FRIALONG	16	11	615736	
40	Long Coupler	FRIALONG	16	11	615737	88443
63	Long Coupler	FRIALONG	16	11	615738	88445

CONICAL RING COUPLER SDR17 PE100

Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
630	Conical ring coupler	KM XL	10	17	616523	
1000	Conical ring coupler	KM XL	10	17	616434	
1200	Conical ring coupler	KM XL	10	17	616435	

Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
20	Coupler with centre stop	MB	16	11	612680	88401
25	Coupler with centre stop	MB	16	11	612681	88402
32	Coupler with centre stop	MB	16	11	612682	88403
40	Coupler with centre stop	MB	16	11	612683	88404
50	Coupler with centre stop	MB	16	11	612684	88405
63	Coupler with centre stop	MB	16	11	612685	88406
75	Coupler with centre stop	MB	16	11	612686	88407
90	Coupler with centre stop	MB	16	11	612687	88408
110	Coupler with centre stop	MB	16	11	612688	88409
125	Coupler with centre stop	MB	16	11	612689	88410
140	Coupler with centre stop	MB	16	11	612690	88411
160	Coupler with centre stop	MB	16	11	612691	88412

DUCER SDR11 PE Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
50 X 20	Reducer	MR	16	11	612069	88481
50 X 32	Reducer	MR	16	11	612070	88483
50 X 40	Reducer	MR	16	11	612071	88484
63 X 50	Reducer	MR	16	11	612072	88488
32 X 20	Reducer	MR	16	11	615386	88476
40 X 20	Reducer	MR	16	11	615387	88478
40 X 32	Reducer	MR	16	11	615388	88480
63 X 32	Reducer	MR	16	11	615389	88486
63 X 40	Reducer	MR	16	11	615390	88487
90 X 50	Reducer	MR	16	11	615391	88491
90 X 63	Reducer	MR	16	11	615392	88492
110 X 63	Reducer	MR	16	11	615393	88494
32 X 25	Reducer	MR	16	11	615502	88477
110 X 90	Reducer	MR	16	11	615693	88495
125 X 90	Reducer	MR	16	11	615694	88496
160 X 110	Reducer	MR	16	11	615695	88499
225 X 160	Reducer	MR	16	11	616356	
32 X 16	Reducer	MR	16	11	616452	
125 X 110	Reducer	MR	16	11	616510	
180 X 125	Reducer	MR	16	11	616511	
90 X 75	Reducer	MR	16	11	616582	
75 X 63	Reducer	MR	16	11	616583	
40 X 25	Reducer	MR	16	11	616751	
50 X 25	Reducer	MR	16	11	616752	
20 X 16	Reducer	MR	16	11	616824	

TRANSITION FIT	TING SDR11 PE100					
Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
32 X 1"	Transition Fittings HD-PE/Brass with male thread	MUN	16	11	612712	
32 X 1 1/4"	Transition Fittings HD-PE/Brass with male thread	MUN	16	11	612709	
32 X 1 1/2"	Transition Fittings HD-PE/Brass with male thread	MUN	16	11	612698	

40 X 1"	Transition Fittings HD-PE/Brass with male thread	MUN	16	11	612721	
40 X 1 1/4"	Transition Fittings HD-PE/Brass with male thread	MUN	16	11	612713	
40 X 1 1/2"	Transition Fittings HD-PE/Brass with male thread	MUN	16	11	612718	
40 X 2"	Transition Fittings HD-PE/Brass with male thread	MUN	16	11	612725	
50 X 1"	Transition Fittings HD-PE/Brass with male thread	MUN	16	11	612719	
50 X 1 1/4"	Transition Fittings HD-PE/Brass with male thread	MUN	16	11	612716	
50 X 1 1/2"	Transition Fittings HD-PE/Brass with male thread	MUN	16	11	612714	
50 X 2"	Transition Fittings HD-PE/Brass with male thread	MUN	16	11	612706	
63 X 1 1/4"	Transition Fittings HD-PE/Brass with male thread	MUN	16	11	612722	
63 X 1 1/2"	Transition Fittings HD-PE/Brass with male thread	MUN	16	11	612717	
63 X 2"	Transition Fittings HD-PE/Brass with male thread	MUN	16	11	612715	
75 X 2"	Transition Fittings HD-PE/Brass with male thread	MUN	16	11	612694	
75 X 2 1/2"	Transition Fittings HD-PE/Brass with male thread	MUN	16	11	612695	

Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
32 X 1"	Transition Elbows 45 HD-PE/Brass with male thread	WUN 45	16	11	612145	
40 X 1 1/4"	Transition Elbows 45 HD-PE/Brass with male thread	WUN 45	16	11	612149	
40 X 1 1/2"	Transition Elbows 45 HD-PE/Brass with male thread	WUN 45	16	11	612139	
50 X 1 1/2"	Transition Elbows 45 HD-PE/Brass with male thread	WUN 45	16	11	612144	
63 X 1 1/2"	Transition Elbows 45 HD-PE/Brass with male thread	WUN 45	16	11	612147	
63 X 2"	Transition Elbows 45 HD-PE/Brass with male thread	WUN 45	16	11	612146	
32 X 1"	Transition Elbows 90 HD-PE/Brass with male thread	WUN 90	16	11	612120	
32 X 1 1/2"	Transition Elbows 90 HD-PE/Brass with male thread	WUN 90	16	11	612140	
40 X 1"	Transition Elbows 90 HD-PE/Brass with male thread	WUN 90	16	11	612127	
40 X 1 1/4"	Transition Elbows 90 HD-PE/Brass with male thread	WUN 90	16	11	612122	
40 X 1 1/2"	Transition Elbows 90 HD-PE/Brass with male thread	WUN 90	16	11	612121	
50 X 1"	Transition Elbows 90 HD-PE/Brass with male thread	WUN 90	16	11	612119	
50 X 1 1/4"	Transition Elbows 90 HD-PE/Brass with male thread	WUN 90	16	11	612123	
50 X 1 1/2"	Transition Elbows 90 HD-PE/Brass with male thread	WUN 90	16	11	612124	

 63 X 1 1/2"	Transition Elbows 90 HD-PE/Brass with male thread	WUN 90	16	11	612125	
63 X 2"	Transition Elbows 90 HD-PE/Brass with male thread	WUN 90	16	11	612126	

Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
20	End Cap	MV	16	11	612025	88758
25	End Cap	MV	16	11	612026	88759
32	End Cap	MV	16	11	612027	88760
40	End Cap	MV	16	11	612028	88761
50	End Cap	MV	16	11	612029	88762
63	End Cap	MV	16	11	612030	88763
75	End Cap	MV	16	11	612031	88764
90	End Cap	MV	16	11	612032	88765
110	End Cap	MV	16	11	612033	88766
125	End Cap	MV	16	11	612034	88767
160	End Cap	MV	16	11	612035	88769
180	End Cap	MV	16	11	616183	88770
200	End Cap	MV	16	11	616184	
225	End Cap	MV	16	11	616185	88772

RELINING SLIDE OVER COUPLING SDR17 PE100								
Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code		
d110/DN100	Relining Slide- Over Coupler	REM	10	17	615569			
d160/DN150	Relining Slide- Over Coupler	REM	10	17	615571			
d315/DN300	Relining Slide- Over Coupler	REM	10	17	615576			

Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
63	Repair and Reinforcing Saddle	RS	16	11	612519	89028
90	Repair and Reinforcing Saddle	RSV	16	11	615164	89030
110	Repair and Reinforcing Saddle	RSV	16	11	615165	89031
125	Repair and Reinforcing Saddle	RSV	16	11	615166	89032
160	Repair and Reinforcing Saddle	RSV	16	11	615168	89034
180	Repair and Reinforcing Saddle	RSV	16	11	615169	89035
200	Repair and Reinforcing Saddle	RSV	16	11	615170	89036
225	Repair and Reinforcing Saddle	RSV	16	11	615171	89037
250-560	Repair and Reinforcing Saddle Top Loading	RS TL	16	11	615397	

Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
500	Repair saddle	RS VL	10	17	616366	
560	Repair saddle	RS VL	10	17	616367	
630	Repair saddle	RS VL	10	17	616368	
710	Repair saddle	RS VL	10	17	616369	
800	Repair saddle	RS VL	10	17	616370	
900	Repair saddle	RS VL	10	17	616371	
1000	Repair saddle	RS VL	10	17	616372	
1200	Repair saddle	RS VL	10	17	616379	

PIGOT SADDLE SDR11 PE100								
Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code		
63x32	Spigot Saddle	SA	16	11	612757	88848		
63x50	Spigot Saddle	SA	16	11	612759	88850		

75x50	Spigot Saddle	SA	16	11	615020	88854
90x32	Spigot Saddle	SA	16	11	615285	88856
90x63	Spigot Saddle	SA	16	11	612819	88859
110x32	Spigot Saddle	SA	16	11	615334	88861
110x50	Spigot Saddle	SA	16	11	615031	88863
110x63	Spigot Saddle	SA	16	11	612760	88864
110x90	Spigot Saddle	SA	16	11	615411	88865
125x32	Spigot Saddle	SA	16	11	615087	88866
125x63	Spigot Saddle	SA	16	11	612761	88869
125x90	Spigot Saddle	SA	16	11	615412	88870
125×110	Spigot Saddle	SA	16	11	615584	00070
160x32	Spigot Saddle	SA	16	11	612886	88876
160x63	Spigot Saddle	SA	16	11	612762	88879
160x90		SA	16	11	615413	88880
160x110	Spigot Saddle	SA	16	11	615739	00000
	Spigot Saddle					
160x125	Spigot Saddle	SA	16	11	615585	00004
180x63	Spigot Saddle	SA	16	11	612763	88884
180x90	Spigot Saddle	SA	16	11	615414	88885
180x110	Spigot Saddle	SA	16	11	615948	88886
180x125	Spigot Saddle	SA	16	11	615740	88887
200x63	Spigot Saddle	SA	16	11	612764	88888
225x63	Spigot Saddle	SA	16	11	612765	88890
225x90	Spigot Saddle	SA	16	11	615415	88891
225x110	Spigot Saddle	SA	16	11	616044	88892
225x125	Spigot Saddle	SA	16	11	616045	88893
225x160	Spigot Saddle	SA	16	11	616046	88894
250-560x32	Spigot Saddle Top Loading	SA TL	16	11	615465	88899
250-560x63	Spigot Saddle Top Loading	SA TL	16	11	615466	88900
250-280x90	Spigot Saddle	SA UNI	16	11	616553	89493
250-280x110	Spigot Saddle	SA UNI	16	11	616554	89494
250-280x125	Spigot Saddle	SA UNI	16	11	616555	89495
250-280x160	Spigot Saddle	SA UNI	16	11	616556	89496
315-400x90	Spigot Saddle	SA UNI	16	11	616557	89497
315-400x110	Spigot Saddle	SA UNI	16	11	616558	89498
315-400x125	Spigot Saddle	SA UNI	16	11	616559	89499
315-400x160	Spigot Saddle	SA UNI	16	11	616560	89500
315-355x225	Spigot Saddle	SA UNI	16	11	617224	
315-355x250	Spigot Saddle	SA UNI	16	11	617225	
450-900x90	Spigot Saddle	SA UNI	16	11	616561	89501
450-900x110	Spigot Saddle	SA UNI	16	11	616562	89502
450-900x125	Spigot Saddle	SA UNI	16	11	616563	89503
450-900x160	Spigot Saddle	SA UNI	16	11	616564	89504
400-450x225	Spigot Saddle	SA UNI	16	11	617226	
400-450x250	Spigot Saddle	SA UNI	16	11	617227	
500-630x225	Spigot Saddle	SA UNI	16	11	617228	
500-630x250	Spigot Saddle	SA UNI	16	11	617229	
710-900x225	Spigot Saddle	SA UNI	16	11	617230	
710-900x250	Spigot Saddle	SA UNI	16	11	617231	
1000-			1000	200	7.7.7.61.5	
1200x225	Spigot Saddle	SA UNI	16	11	617232	
1000- 1200x250	Spigot Saddle	SA UNI	16	11	617233	
1200/225	Spigot Saddle	SA VL	16	11	616384	
500/225	Spigot Saddle	SA VL	16	11	616391	
560/225	Spigot Saddle	SA VL	16	11	616392	

630/225	Spigot Saddle	SA VL	16	11	616393	
710/225	Spigot Saddle	SA VL	16	11	616394	
800/225	Spigot Saddle	SA VL	16	11	616395	
900/225	Spigot Saddle	SA VL	16	11	616396	
1000/225	Spigot Saddle	SA VL	16	11	616397	
450/225	Spigot Saddle	SA VL	16	11	616780	
450/250	Spigot Saddle	SA VL	16	11	616781	

Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
d125/DN100	Spigot Saddle with Flange Outlet	SAFL	16	11	616021	
d160/DN100	Spigot Saddle with Flange Outlet	SAFL	16	11	616022	
d180/DN100	Spigot Saddle with Flange Outlet	SAFL	16	11	616023	
d225/DN100	Spigot Saddle with Flange Outlet	SAFL	16	11	616024	

Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
90	Balloon Shut Off Saddle	SPA	16	11	612677	88909
110	Balloon Shut Off Saddle	SPA	16	11	612750	88910
125	Balloon Shut Off Saddle	SPA	16	11	612751	88911
160	Balloon Shut Off Saddle	SPA	16	11	612752	88912
63	Balloon Shut Off Saddle	SPA	16	11	612753	
180	Balloon Shut Off Saddle	SPA	16	11	612754	88913
200	Balloon Shut Off Saddle	SPA	16	11	612755	88914
225	Balloon Shut Off Saddle	SPA	16	11	612756	88915
250-560	Balloon Shut Off Saddle	SPA TL	16	11	615395	88916

AP FOR SHUT O	P FOR SHUT OFF SADDLE SDR11 PE100								
Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code			
75	Cap for Shut Off Saddle	SPAK	16	11	612311				

Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
75 X 75 X 75	T-Piece	Т	16	11	612165	88509
90 X 90 X 90	T-Piece	Т	16	11	612166	88510
110 X 110 X 110	T-Piece	т	16	11	612167	88511
125 X 125 X 125	T-Piece	т	16	11	612168	88512
160 X 160 X 160	T-Piece	т	16	11	615277	88513
180 X 180 X 180	T-Piece	т	16	11	615691	88514
225 X 225 X 225	T-Piece	т	16	11	615692	88516
200 X 200 X 200	T-Piece	т	16	11	616266	
250 X 250 X 250	T-Piece	т	16	11	616412	
280 X 280 X 280	T-Piece	т	16	11	616413	
315 X 315 X 315	T-Piece	Т	16	11	616414	
20 X 20 X 20	T-piece with outlet spigot	TA	16	11	616685	
25 X 25 X 25	T-piece with outlet spigot	TA	16	11	616338	
32 X 32 X 32	T-piece with outlet spigot	TA	16	11	615719	
40 X 40 X 40	T-piece with outlet spigot	TA	16	11	615720	
50 X 50 X 50	T-piece with outlet spigot	TA	16	11	615721	
63 X 63 X 63	T-piece with outlet spigot	TA	16	11	615722	

90 X 90	T-piece with outlet spigot	TA	16	11	616677	
110 X 110	T-piece with outlet spigot	TA	16	11	616680	
160 X 160	T-piece with outlet spigot	TA	16	11	616684	
180 X 180	T-piece with outlet spigot	TA	16	11	617175	
200 X 200	T-piece with outlet spigot	TA	16	11	617179	
225 X 225	T-piece with outlet spigot	TA	16	11	617183	
32 X 32 X 20	T-Piece with reduced outlet spigot	TA RED	16	11	616417	
40 X 40 X 32	T-Piece with reduced outlet spigot	TA RED	16	11	616418	
50 X 50 X 32	T-Piece with reduced outlet spigot	TA RED	16	11	616419	
50 X 50 X 40	T-Piece with reduced outlet spigot	TA RED	16	11	616420	
63 X 63 X 32	T-Piece with reduced outlet spigot	TA RED	16	11	616421	
63 X 63 X 40	T-Piece with reduced outlet spigot	TA RED	16	11	616422	
63 X 63 X 50	T-Piece with reduced outlet spigot	TA RED	16	11	616423	
90 X 90 X 32	T-Piece with reduced outlet spigot	TA RED	16	11	616675	
90 X 90 X 63	T-Piece with reduced outlet spigot	TA RED	16	11	616676	
110 X 110 X 63	T-Piece with reduced outlet spigot	TA RED	16	11	616678	
110 X 110 X 90	T-Piece with reduced outlet spigot	TA RED	16	11	616679	
160 X 160 X 90	T-Piece with reduced outlet spigot	TA RED	16	11	616681	
160 X 160 X 110	T-Piece with reduced outlet spigot	TA RED	16	11	616682	
160 X 160 X 125	T-Piece with reduced outlet spigot	TA RED	16	11	616683	
180 X 180 X 125	T-Piece with reduced outlet spigot	TA RED	16	11	617174	
200 X 200 X 90	T-Piece with reduced outlet spigot	TA RED	16	11	617176	
200 X 200 X 110	T-Piece with reduced outlet spigot	TA RED	16	11	617177	
200 X 200 X 160	T-Piece with reduced outlet spigot	TA RED	16	11	617178	
225 X 225 X 90	T-Piece with reduced outlet spigot	TA RED	16	11	617180	
225 X 225 X 110	T-Piece with reduced outlet spigot	TA RED	16	11	617181	
225 X 225 X 160	T-Piece with reduced outlet spigot	TA RED	16	11	617182	
250 X 250 X 225	T-Piece with reduced outlet spigot	TA RED	16	11	616427	
280 X 280 X 225	T-Piece with reduced outlet spigot	TA RED	16	11	616429	
315 X 315 X 225	T-Piece with reduced outlet spigot	TA RED	16	11	616431	

Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
16	Slide-over coupler	UB	16	11	616577	
20	Slide-over coupler	UB	16	11	612660	
25	Slide-over coupler	UB	16	11	612661	
32	Slide-over coupler	UB	16	11	612662	
40	Slide-over coupler	UB	16	11	612663	
50	Slide-over coupler	UB	16	11	612664	
63	Slide-over coupler	UB	16	11	612665	88448
75	Slide-over coupler	UB	16	11	612666	88449
90	Slide-over coupler	UB	16	11	612667	88450
110	Slide-over coupler	UB	16	11	612668	
125	Slide-over coupler	UB	16	11	612669	
140	Slide-over coupler	UB	16	11	615001	88453

160	Slide-over coupler	UB	16	11	612671	2005 v 2015 100
180	Slide-over coupler	UB	16	11	612672	88413
200	Slide-over coupler	UB	16	11	612673	88414
225	Slide-over coupler	UB	16	11	612674	88415
315	Slide-over coupler	UB	16	11	612670	88418
250	Slide-over coupler	UB	16	11	617278	
280	Slide-over coupler	UB	16	11	617279	
315	Slide-over coupler	UB	16	11	617280	
355	Slide-over coupler	UB	16	11	615074	88419
400	Slide-over coupler	UB	16	11	615075	88420
450	Slide-over coupler	UB	16	11	615076	88421
500	Slide-over coupler	UB	16	11	615124	88422
560	Slide-over coupler	UB	16	11	616312	
630	Slide-over coupler	UB	16	11	616269	
710	Slide-over coupler	UB	16	11	616313	
800	Slide-over coupler	UB	16	11	616314	
900	Slide-over coupler	UB	16	11	616440	

DE OVER COUP	LER SDR17 PE100					
Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
560	Slide-over coupler	UB SDR17	10	17	615706	88465
630	Slide-over coupler	UB SDR17	10	17	615726	88466
710	Slide-over coupler	UB SDR17	10	17	615994	
800	Slide-over coupler	UB SDR17	10	17	616290	
900	Slide-over coupler	UB SDR17	10	17	616345	
1000	Slide-over coupler	UB SDR17	10	17	616403	
1200	Slide-over coupler	UB SDR17	10	17	616416	
315	Slide-over coupler	UB SDR17	10	17	616529	
355	Slide-over coupler	UB SDR17	10	17	616530	
400	Slide-over coupler	UB SDR17	10	17	616531	
450	Slide-over coupler	UB SDR17	10	17	616532	
500	Slide-over coupler	UB SDR17	10	17	616533	

Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
400	Slide-over coupler	UB SDR9	20	9	615075	88420
450	Slide-over coupler	UB SDR9	20	9	615076	88421
500	Slide-over coupler	UB SDR9	20	9	615124	88422
630	Slide-over coupler	UB SDR9	20	9	616269	
560	Slide-over coupler	UB SDR9	20	9	616312	

Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
90	Slide-over coupler	UB SDR7.4	25	7.4	616270	
110	Slide-over coupler	UB SDR7.4	25	7.4	616271	
125	Slide-over coupler	UB SDR7.4	25	7.4	616272	
140	Slide-over coupler	UB SDR7.4	25	7.4	616273	
160	Slide-over coupler	UB SDR7.4	25	7.4	616274	
180	Slide-over coupler	UB SDR7.4	25	7.4	616282	
200	Slide-over coupler	UB SDR7.4	25	7.4	616283	
225	Slide-over coupler	UB SDR7.4	25	7.4	616284	
250	Slide-over coupler	UB SDR7.4	25	7.4	616285	•
280	Slide-over coupler	UB SDR7.4	25	7.4	616286	
315	Slide-over coupler	UB SDR7.4	25	7.4	616287	
355	Slide-over coupler	UB SDR7.4	25	7.4	616288	

Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
63x1 1/2*	Valve Tapping Saddle/Female Thread Gunmetal	VAM RG	16	11	612743	89039
63x1 1/4"	Valve Tapping Saddle/Female Thread Gunmetal	VAM RG	16	11	612794	
75x1 1/4"	Valve Tapping Saddle/Female Thread Gunmetal	VAM RG	16	11	615213	89040
90x1 1/2*	Valve Tapping Saddle/Female Thread Gunmetal	VAM RG	16	11	612798	89041
90x2"	Valve Tapping Saddle/Female Thread Gunmetal	VAM RG	16	11	612778	89042
110x1 1/2*	Valve Tapping Saddle/Female Thread Gunmetal	VAM RG	16	11	612732	89044
110x2"	Valve Tapping Saddle/Female Thread Gunmetal	VAM RG	16	11	612733	89045
125x1 1/2*	Valve Tapping Saddle/Female Thread Gunmetal	VAM RG	16	11	612734	89047
125x2*	Valve Tapping Saddle/Female Thread Gunmetal	VAM RG	16	11	612735	89048
160x1 1/2*	Valve Tapping Saddle/Female Thread Gunmetal	VAM RG	16	11	612728	89051
160x2"	Valve Tapping Saddle/Female Thread Gunmetal	VAM RG	16	11	612729	89052
225x2"	Valve Tapping Saddle/Female Thread Gunmetal	VAM RG	16	11	612827	89057
50-560x2*	Valve Tapping Saddle Top Loading/Female Thread Gunmetal	VAM RG TL	16	11	615470	

Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
110	Elbow 11	WS11	16	11	616139	88597
125	Elbow 11	WS11	16	11	616140	88598
160	Elbow 11	WS11	16	11	616141	88599
180	Elbow 11	WS11	16	11	616142	88600
225	Elbow 11	WS11	16	11	616143	88601
90	Elbow 30	W30	16	11	615272	88607
110	Elbow 30	W30	16	11	615273	88608
125	Elbow 30	W30	16	11	615274	88609
160	Elbow 30	W30	16	11	615340	88610
180	Elbow 30	W30	16	11	616261	88611
200	Elbow 30	W30	16	11	616262	
225	Elbow 30	W30	16	11	616263	
32	Elbow 45	W45	16	11	612092	88614
40	Elbow 45	W45	16	11	612094	88615
50	Elbow 45	W45	16	11	612096	88616
63	Elbow 45	W45	16	11	612098	88617
75	Elbow 45	W45	16	11	612100	88618
90	Elbow 45	W45	16	11	612102	88619
110	Elbow 45	W45	16	11	612104	88620
125	Elbow 45	W45	16	11	612106	88621
160	Elbow 45	W45	16	11	615275	88623
180	Elbow 45	W45	16	11	615687	88624
200	Elbow 45	W45	16	11	616264	
225	Elbow 45	W45	16	11	615688	88626
250	Elbow 45	W45	16	11	616404	

280	Elbow 45	W45	16	11	616405	
315	Elbow 45	W45	16	11	616406	
20	Elbow 90	W90	16	11	616686	
25	Elbow 90	W90	16	11	612091	88631
32	Elbow 90	W90	16	11	612093	88632
40	Elbow 90	W90	16	11	612095	88633
50	Elbow 90	W90	16	11	612097	88634
63	Elbow 90	W90	16	11	612099	88635
75	Elbow 90	W90	16	11	612101	88636
90	Elbow 90	W90	16	11	612103	88637
110	Elbow 90	W90	16	11	612105	88638
125	Elbow 90	W90	16	11	612107	88639
160	Elbow 90	W90	16	11	615276	88641
180	Elbow 90	W90	16	11	615689	88642
200	Elbow 90	W90	16	11	616265	
225	Elbow 90	W90	16	11	615690	88644
250	Elbow 90	W90	16	11	616408	
280	Elbow 90	W90	16	11	616409	
315	Elbow 90	W90	16	11	616410	

WAN NECK BEND SDR11 PE100							
Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code	
32	Swan Neck Bend	WET	16	11	616051		
40	Swan Neck Bend	WET	16	11	616052		
50	Swan Neck Bend	WET	16	11	616053		
63	Swan Neck Bend	WET	16	11	616699		

ELBOW WITH BASE UNIT SDR11 PE100						
Size	Product Description	Model	PN Water	SDR	Aliaxis Code	Vinidex Code
90 X 63	90 Elbow with base unit	WF 90	16	11	615989	
110 X 63	90 Elbow with base unit	WF 90	16	11	615998	

APPENDIX B - QUALITY CERTIFICATIONS

Copies of the following Quality Certification Certificates are available from WSAA

TABLE B1 VINIDEX PTY LTD - MANAGEMENT SYSTEMS

26 College Street Darlinghurst NSW				
Quality Systems Standard	ISO 9001:2015			
Certification Licence No.	QEC0570			
Certifying Agency	Intertek SAI Global			
First Date of Certification	19 February 1991			
Current Date of Certification	30 January 2025			
Expiry Date of Certification	21 November 2026			

TABLE B2 ALIAXIS DEUTSCHLAND GMBH - MANAGEMENT SYSTEMS

Steinzeugstrasse, 50, Mannheim, Germany				
Quality Systems Standard	ISO 9001:2015			
Certification Licence No.	01 100 060216			
Certifying Agency	TÜV Rheinland			
Current Date of Certification	12 May 2024			
Expiry Date of Certification	11 May 2027			

TABLE B3 ALIAXIS DEUTSCHLAND GMBH - PRODUCT CERTIFICATION

Steinzeugstrasse 50 Mannheim Germany				
Product Standard/Spec.	AS/NZS 4129:2020			
StandardsMark Licence No.	SMKP20677			
Issuing Certification Body	Intertek SAI Global			
First Date of Certification	19 December 2007			
Current Date of Certification	9 January 2025			
Expiry Date of Certification	18 December 2027			



CERTIFICATE OF REGISTRATION

This is to certify that:

Vinidex Pty Ltd

Level 4 26 College Street Darlinghurst NSW 2010 AUSTRALIA (Refer to Attachment to Certificate of Registration dated 30 January 2025 for additional certified sites)

QUALITY MANAGEMENT SYSTEM

which complies with the requirements of

ISO 9001:2015

for the following scope

The design, manufacture and distribution of polyethylene, polypropylene, modified PVC, oriented PVC and unplasticised PVC pipes, conduits and associated fittings for the water supply, sewerage, drainage, electrical, mining, gas, rural and communications industries.

Certificate Number: QEC0570

Originally Certified:

19 February 1991

Current Certification:

30 January 2025

Issue Date:

30 January 2025

Expiry Date:

21 November 2026





ISO 9001

Calin Moldovean

President, Business Assurance

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

SAI Global Certification Services Pty Ltd (ACN 108 716 669) Level 7 Suite 7.01 45 Clarence Street Sydney NSW 2000 Australia with SAI Global Pty Limited Level 7 Suite 7.01 45 Clarence Street Sydney NSW 2000 Australia ("SAI Global") and subject to the SAI Global Terms and Conditions for Certification. While all due care and skill was exercised in carrying out this assessment, SAI Global accepts responsibility only for proven negligence. This certificate remains the property of SAI Global and must be returned to SAI Global upon its request. To verify that this certificate is current please refer to SAI Global On-Line Certification register at http://register.saiglobal.com/



Certificate

Standard ISO 9001:2015

Certificate Registr. No. 01 100 060216

Certificate Holder: Aliaxis Deutschland GmbH

Steinzeugstr. 50 68229 Mannheim Germany

Scope: Development, manufacturing and sales of products

for gas-, water-, sewage- and industry systems

Proof has been furnished by means of an audit that the

requirements of ISO 9001:2015 are met.

Validity: The certificate is valid from 2024-05-12 until 2027-05-11.

First certification 2006

2024-04-10

TÜV Rheinland Cert GmbH Am Grauen Stein · 51105 Köln

www.tuv.com







The product schedule attached to this Licence is 41 pages long and has not been included. A copy of the product schedule may be obtained from WSAA or at the following link: https://register.saiglobal.com/Client/PrintSchedule/schedules/Certificate%20SMKP20677%2013 052025.pdf

STANDARDSMARK LICENCE



Intertek SAI Global hereby grants: Aliaxis Deutschland GmbH

Steinzeugstrasse 50, Friedrichsfeld, Mannheim, Germany

StandardsMark Licence

Manufactured to:

AS/NZS 4129:2020 - 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: SMKP20677

Originally Certified: 19 December 2007

Current Certification: 9 January 2025

Issued: 13 May 2025

Expires: 18 December 2027



Rathin Grover

President, Business Assurance

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

* For details of manufacture, refer to the license

The STANDARDSMARK is a registered certification trademark of SAI Global Pty Limited (A.C.N. 050 644 642) and is issued under licence by SAI Global Certification Services Pty Limited (A.C.N. 050 716 669) (INTERTEX SAI Global Level 7 Suite 7.01 45 Clarence Street Sydney NSW 2000 Australia and subject on the INTERTEX SAI Global Terms and Conditions for Certification. In the issuance of this certificate RETEX SAI Global assumes no isability to any other than to the Client, and then only in accordance with the agreed upon Certification Agreement. This certificate is validity is subject to the organization and the control of the Client, and then only in accordance with the agreed upon Certification Agreement. This certificate is validity is subject to the organization and the control of the Client of the Client and the control of the Client SAI Global to whom it must be returned upon request. Refer to https://impistex.saiglobal.com/for the list of productions.



APPENDIX C - SUPPLIER CONTACTS

Vinidex Pty Ltd

Vinidex locations: https://www.vinidex.com.au/contact-us-2/

Phone: 131169

Emails:

Queensland: qldsales@vinidex.com.au

Victoria: wasales@vinidex.com.au

Western Australia: wasales@vinidex.com.au New South Wales: swsales@vinidex.com.au

Web: https://www.vinidex.com.au/



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Sydney Office

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

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