



Rapid Clamps Pty Ltd

PRODUCT APPRAISAL REPORT 1903 Issue 2

Rapid Clamps CT Tapping Saddles for PE Pipes

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

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Peer Reviewers

Name/Title	Organisation	Date
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Carl Radford, Product Appraisal Manager	WSAA	3 July 2019
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Carl Radford, Product Appraisal Manager	WSAA	17 January 2022

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 Recommendation	5
2 THE APPLICANT	5
2.1 The Supplier	5
2.2 The Manufacturer	5
3 THE PRODUCT	6
4 SCOPE OF THE APPRAISAL	6
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 Type Testing	8
6.2.2 Materials	8
6.2.2.1 Body components	8
6.2.2.2 Nuts, bolts and washers	8
6.2.2.3 Elastomeric seals	8
6.2.2.4 Effect on water	8
6.2.3 Design	9
6.2.3.1 Fitment and attachment	9
6.2.3.2 Outlet threads	9
7 FITTING INSTRUCTIONS, TRAINING AND INSTALLATION	9
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 FUTURE WORKS	9
13 OUTCOMES OF EXPERT PANEL PRODUCT REVIEW	10
14 DISCLAIMER	10
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	11
14.3 No Updating	11
14.4 No Warranty	11
APPENDIX A - PRODUCT LITERATURE	12
APPENDIX B – QUALITY CERTIFICATIONS	15
APPENDIX C - WSA PRODUCT SPECIFICATION	21
APPENDIX D - SUPPLIER CONTACTS	22

1 EXECUTIVE SUMMARY

Rapid Clamps Pty Ltd is the Australian distributor of stainless-steel repair clamps, tapping saddles and associated fittings manufactured by Cascade Control Pty Ltd in South Africa. Rapid Clamps operates a warehouse and distribution business located in Brendale Queensland.

This Appraisal considers Rapid Clamps CT Tapping Saddles that are compatible with DN 75 to DN 355 PE pipes with tapped outlets of ¾"/20 to 2"/50 BSP, manufactured to conform with AS/NZS 4129:2008 *Fittings for polyethylene (PE) pipes for pressure applications*.

This Issue 2 is to clarify the terminology used for the description of the tapping saddles. The original version of this Appraisal referred to the tapping saddles as CT2, a terminology used interchangeably with CT to nominate 2 parts to the tapping saddle. To avoid confusion this report has been amended to refer to the tapping saddles consistently as CT. The ISO 9001 certification has also been updated. The Applicant's name has also been clarified as Rapid Clamps Pty Ltd.

The tapping saddles consist of two Grade 316 stainless steel segments with a fully lined nitrile rubber mat, incorporating a static and dynamic lip seal, joined by 2 or 4 stainless steel studs and nuts.

The tapping saddles are designed to suit a range of pipe outside diameters. AS/NZS 4129:2008 does not require tapping saddles for PE pipes to be full circle design. The Rapid Clamps CT tapping saddles are therefore not full circle design and may be used on other rigid pipes subject to pipe OD compatibility. The tapping saddles are considered unsuitable for use with PVC pipes.

The allowable operating pressure of the tapping saddles is 1600 kPa.

Cascade operates under a quality management system certified to ISO 9001:2015.

The Rapid tapping saddles have ApprovalMark ISO Type 5 Product Certification to AS/NZS 4129:2008, issued by ApprovalMark International.

The Rapid Clamps CT tapping saddles described within this appraisal meet the requirements of WSA PS- 327 *Tapping bands, mechanical, for use with polyethylene (PE) mains for pressure applications – Water supply* and are therefore deemed as 'fit for purpose'

1.1 Recommendation

It is recommended that WSAA members, subject to any specific requirements of the member, accept/authorise Rapid Clamps CT tapping saddles for PE pipes for water applications, as detailed in this report, provided pipeline design, installation, acceptance testing and commissioning are in accordance with applicable WSAA Codes and the manufacturer's requirements, where specified.

2 THE APPLICANT

The Applicant is Rapid Clamps Pty Ltd.

2.1 The Supplier

Rapid Clamps Pty Ltd is the Australian distributor of Cascade stainless steel repair clamps, tapping saddles and associated fittings. It operates a warehouse and distribution business located in Brendale Queensland.

2.2 The Manufacturer

The manufacturing facility of Cascade Control Pty Ltd is located in Germiston, South Africa. Cascade has been manufacturing stainless steel pipe repair couplings and related fittings since 1986. Cascade distributes its stainless-steel pipe repair clamps throughout South Africa and also services UK, Middle East, Malaysia and Australia.

3 THE PRODUCT

The Rapid Clamps CT Tapping Saddles provides a means for the connection of property services to reticulated network pipelines with allowable operating pressures up to 1600 kPa (PN16).

The CT Tapping Saddles are designed with two Grade 316 Stainless Steel segments that are assembled together for installation onto PE pipes.

AS/NZS 4129:2008 does not require tapping saddles for PE pipes to be full circle design. The Rapid Clamps CT tapping saddles are therefore not full circle design and may be used on other rigid pipes subject to pipe OD compatibility. The tapping saddles are considered unsuitable for use with PVC pipes.

The two stainless steel segments are held together with 316 stainless steel studs, nuts and washers, supplied with polytetrafluoroethylene coated threads to prevent galling during installation. The studs are welded to the bottom segment.

The inner surface of the tapping band is fully lined with a nitrile rubber mat to provide insulation protection against galvanic corrosion. A combination static and dynamic lip seal provides a watertight connection. A patented internal stainless steel retaining disc is also incorporated into the sealing mechanism to prevent the mat and seal from extruding out under pressure. The specially designed seal mechanism allows the tapping saddles to be utilised on a wide range of pipe outside diameters.

The nitrile rubber mat is compliant with AS 1646 and provides resistance to contaminants such as oils, diesel and other hydrocarbons.

4 SCOPE OF THE APPRAISAL

The scope of this appraisal applies to Rapid Clamps CT tapping saddles in sizes DN 75 to DN 355, with ¾"/20, 1"/25, 1¼"/32, 1½"/40 and 2"/50 female threaded BSP off takes, for application to AS/NZS 4130 PE pipes.

AS/NZS 4129 does not specify which sizes should be type tested for qualification purposes. Cascade has tested DN 125, DN 180, DN 280 and DN 355. This is considered to adequately represent the available size range.

Refer to Table 1 for the range of Rapid Clamps CT tapping saddles for PE pipes.

TABLE 1 – RAPID CLAMPS CT TAPPING SADDLES FOR PE PIPE

PE Pipe OD	Outlet Size	Pipe OD Range	Width	No of Studs
75, 90	20, 25	75-90	130	2
90	20, 25	88-108	130	2
	32, 40, 50		130	2
110, 125	20, 25	110-135	130	2
	32, 40, 50		150	2
140, 160	20, 25	135-160	130	2
	32, 40, 50		150	2
160, 180	20, 25	160-190	130	2

PE Pipe OD	Outlet Size	Pipe OD Range	Width	No of Studs
	32, 40, 50		150	2
200	20, 25	190-220	130	2
	32, 40, 50		150	2
225	20, 25	210-240	130	2
	32, 40, 50		150	2
250	20, 25	240-270	130	2
	32, 40, 50		150	4
280	20, 25	270-300	130	2
	32, 40, 50		150	4
315	20, 25	300-330	130	4
	32, 40, 50		150	4
355	20, 25	330-360	130	4
	32, 40, 50		150	4

5 APPRAISAL CRITERIA

5.1 Quality Assurance Requirements

The WSAA Product Appraisal Technical Advisory Group accepts mechanical tapping saddles for PE pipes 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

Rapid Clamps CT Tapping Saddles for PE pipes have been appraised for compliance with AS/NZS 4129:2008 *Fittings for polyethylene (PE) pipes for pressure applications*.

Appraisal criteria are also determined by the WSAA Infrastructure Products and Materials Network and regularly reviewed to ensure that the criteria reflect the requirements of WSAA members.

The following Product Specification is also relevant to this application:

WSA PS- 327 *Tapping bands, mechanical, for use with polyethylene (PE) mains for pressure applications – Water supply*

A copy of the above Product Specification can be found in Appendix B or downloaded from the WSAA members only website.

6 COMPLIANCE WITH APPRAISAL CRITERIA

6.1 Compliance with Quality Assurance Requirements

Cascade Control Pty Ltd has submitted the following quality certificates:

- ISO 9001:2015 Certificate of Registration No. ZA17/209998 issued to Cascade Sales & Distribution (Pty) Ltd by SGS.
- AS /NZS 4129:2008 ApprovalMark product certification licence No. AMI 74732 issued to Cascade Sales & Distribution (Pty) Ltd T/A Rapid Clamps by ApprovalMark International.

Copies of Quality Assurance licences have been included in Appendix B and are also available for downloading from the WSAA member's website.

6.2 Compliance with Performance Requirements

6.2.1 Type Testing

Cascade has provided reports from Australian Pipes and Fittings Testing Centre (NATA Accreditation No. 19957) to verify type testing of tapping saddles for DN 125, DN 180, DN 280 and DN 355 size. Copies of test reports are available upon request from WSAA subject to the Applicant's authorisation.

Tests were conducted in accordance with the following Clauses of AS/NZS 4129:2008.

Clause 4.4.2 - Liquid Infiltration

Clause 4.4.3 – Leak resistance under pressure when subjected to bending

Clause 4.4.4 - Hydrostatic pressure. 2.4 MPa at 20°C and 1.76MPa at 40 ° C for 1000 hours.

Clause 4.4.5 – Resistance to pressure during application of bending moment to the branch outlet

Clause 4.4.6.2 – Resistance to rotational sliding of the saddle on the pipe

Clause 4.4.6.3 – Resistance to axial sliding of the saddle on the pipe

All tests indicated compliance with the criteria.

AS/NZS 4129 does not specify which sizes should be type tested for qualification purposes. Cascade has tested DN 125, DN 180, DN 280 and DN 355. This is considered to adequately represent the available size range.

6.2.2 Materials

6.2.2.1 Body components

The body of the tapping saddles are manufactured from Grade 316 Stainless Steel and fully passivated after welding.

6.2.2.2 Nuts, bolts and washers

The studs, nuts and washers utilised on the Rapid Clamps CT Tapping Saddles are M16 Grade 316 Stainless Steel.

6.2.2.3 Elastomeric seals

The Nitrile HT462712 lip seal mats are supplied by Hultec Pty Ltd and moulded by Thai Duong Joint Stock Company in Vietnam. Thai Duong has ApprovalMark certification to AS1646:2007 *Elastomeric seals for waterworks purposes*.

6.2.2.4 Effect on water

Test reports by Eurofins confirms that the tapping band material and the Nitrile compound both comply with the effect on water requirements of AS/NZS 4020. Test report references

are 1828304 dated 19 November 2018 and 1630281/1 dated 13 November 2017, respectively.

6.2.3 Design

6.2.3.1 Fitment and attachment

Assembly instructions have been provided and are attached in Appendix A.

6.2.3.2 Outlet threads

The CT tapping saddles incorporate a weld on boss with a parallel thread conforming to ISO 7.1:2008 *Pipe threads where pressure-tight joints are made on the threads - Dimensions, tolerances and designation*. Machined threads are gauged with a calibrated go/no-go gauge to ensure that specifications are maintained.

7 FITTING INSTRUCTIONS, TRAINING AND INSTALLATION

A copy of the installation instructions can be found in Appendix A which includes recommended torques.

As the installation instructions provide sufficient information for an installer to achieve a successful installation, there is no requirement for additional training.

8 PRODUCT MARKING

The Rapid Clamps CT Tapping Saddles have the following marking printed on the bottom segment as follows:

Manufacturer:	Rapid
Product Code/Pipe OD Range/Tapping Size:	e.g., CT - 210/240 x 1"
Standard:	AS/NZS 4129
Licence Number:	AMI 74732

9 PACKAGING AND TRANSPORTATION

Rapid Clamps CT tapping saddles are packed in double-wall cartons measuring 430 mm x 430 mm with various heights to accommodate all sizes of the saddles in fixed numbers per size. Standard pallets are used to fit nine cartons per layer. Pallet packs are assembled in line with standard shipping modes and machinery used by international carriers.

Local distributors in Australia repack for individual deliveries.

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

11 WATER AGENCY EXPERIENCE WITH THE PRODUCT OR FIELD TESTING REPORT

Rapid Clamps generally supply their tapping saddles through a reseller network. The tapping saddles have been provided to the market for more than seven years with no reported failures.

A report on a trial in 2017 by Australian Water & Irrigation Solutions for a specific project approval by Yarra Valley Water prior to the installation of 50 off DN 355 x 3/4" tapping saddles was submitted by Cascade Control and is available from WSAA.

12 FUTURE WORKS

No future works have been identified.

13 OUTCOMES OF EXPERT PANEL PRODUCT REVIEW

No issues were 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 indemnity insurance that the provider of the product maintains. Recipients should ensure that they evaluate the allocation of liability for product defects and any professional advice obtained in relation to the product or its specification including the requirements for product liability and professional indemnity insurance.

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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



CT TAPPING SADDLES FOR PE PIPE



AS/NZS 4129
WM 74732

CT Tapping Saddles are suitable for use on Polyethylene pipe (PE), which require an offtake for connection to another pipe. They eliminate the need to "cut in" an off take, as the saddle can be installed around the pipe without disrupting the internal flow and Tapped Under Pressure. They are designed to fit a range of pipe ODs in one saddle, and they adapt to the pipe ovality and irregularities.

CT Tapping Saddles are constructed from 316 Stainless Steel and have a fully line rubber mat designed to insulate the pipe and protect it from stray currents. The Tapping Saddle seal is specially designed. It incorporates a static seal and a dynamic lip seal. Also incorporated into the seal is an internal stainless steel retaining disc#, which prevents the seal and mat from extruding out, under extreme internal pressure. The specially designed seal allows for pipe outside diameter changes, caused by pressurizing and depressurizing of the pipe.

MATERIAL SPECIFICATION & STANDARDS

CT Tapping Saddles are designed and manufactured under Quality Management System, certificate to ISO9001:1994. AS/NZS 4129 for DN80 to DN300 with 20mm to 50mm BSP only.

Body

316 Stainless Steel
ASTM A240M

Sealing Gasket#

Nitrile
AS1646, AS/NZS 4020

Bolts, Nuts and Washers

316 Stainless Steel
ASTM A240M

BSP Tapping

316 Stainless Steel ATSM A312M
BSP to AS1722.1

Working Pressure: = 1.6MPa **Working Temperature:** 0 to 60 Degrees C

DN Pipe	Pipe OD Range (mm)	Code	BSP Tapping X (mm)*
80-	75-90	CT2-75/90 x X	20 & 25
80-	88-108	CT2-88/108 x X	20, 25, 32, 40, & 50
100-	110-135	CT2-110/135 x X	20, 25, 32, 40, 50
125-	135-160	CT2-135/160 x X	20, 25, 32, 40, 50
150-	160-190	CT2-160/190 x X	20, 25, 32, 40, 50
175-	190-220	CT2-190/220 x X	20, 25, 32, 40, 50
200-	210-240	CT2-210/240 x X	20, 25, 32, 40, 50
225-	240-270	CT2-240/270 x X	20, 25, 32, 40, 50
250-	270-300	CT2-270/300 x X	20, 25, 32, 40, 50
275-	300-330	CT2-300/330 x X	20, 25, 32, 40, 50
300-	330-360	CT2-330/360 x X	20, 25, 32, 40, 50

Clamp width BSP 20 & 25mm = 130mm. 32, 40 & 50mm = 150mm.

Larger pipe OD sizes and off take sizes and configurations are available but are not covered under AS/NZS 4129 or WSAA.

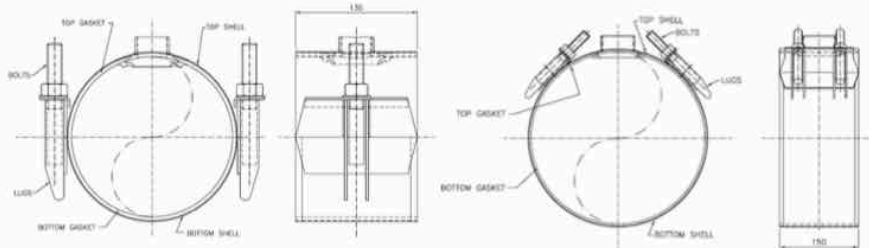
#Innovation Patent 2011100263



SPECIFICATIONS for Rapid 316 CT Tapping Saddles For Use On PE Pipe



AS/NZS 4129
**WM 74732



Grade of stainless steel, Type 316. Fully passivized after welding, to restore the original passive state of the 316 stainless steel.

LOCKING WASHER PLATE: SS316 Locks into position for easy tightening of nuts.

LUGS: SS316 MIG-welded to receiver bar and fully passivized after welding. Leading edge is rounded to prevent them from catching bolt bars during installation.

SHELL: SS316 2B finish.

BOLTS: SS316 Thread-rolled for strength and coated to prevent galling. Bolts are MIG-welded to the receiver bar and fully passivized after welding.

NUTS/WASHERS: SS316.

RECEIVER BARS: SS316 TIG-welded to shell to form a strong fusion, and fully passivized after welding.

GASKET: Nitrile, to AS1646 and AS4020. The gasket is specially designed with a static seal and a dynamic lip seal. Also incorporated into the seal is an internal stainless steel retaining disc#, which prevents the seal and mat from extruding out, under extreme internal pressure. The specially designed seal allows for pipe outside diameter changes, caused by pressurizing and depressurizing of the pipe.

TAPPINGS: SS316 stainless steel, DN 15mm to DN100mm BSP Rp parallel threaded socket. Flanges SS316, standard AS4087 PN16, drilled to Table D (DN80 & 100). Other configurations avail.

General Information:

Offtake tapping DN15mm, DN20mm, and DN25mm, saddle width = 130mm.

Offtake tapping DN32mm, DN40mm, and DN50mm, saddle width = 150mm.

Offtake tapping DN65mm and DN80mm, saddle width = 200mm.

Offtake tapping DN100mm, saddle width = 300mm.

Working Pressure Ratings:

(a) Tapping saddle to suit pipes OD75mm up to OD680mm = 1.6 MPa.*

(b) Tapping saddle to suit pipes OD680mm up to OD980mm nominal size = 1.2 MPa.*

The amount of pressure that the tapping saddles will contain is proportionate to the diameter of the pipe. Smaller diameter tapping saddles will contain more pressure than larger diameter tapping saddles.

Suitable anchorage must be provided where pipe movement may occur. Suitable mechanical support should be used to support the off-take fittings *Pressure ratings may vary due to pipe condition and type. ** Sizes DN80 to DN300mm with 20mm to 50mm BSP only. Max. Temperature 0 - 60 degrees C. Re-tension saddle at Max. operating temp. #Innovation Patent 2011100263. Specifications are subject to change without notice.

2015



INSTALLATION GUIDE CASCADE/RAPID CLAMPS

CT Tapping Saddles

Permanent Connection Made Quick and Easy



The CT Tapping Saddle is made from 316 Stainless Steel with a nitrile gasket, and is design for permanent tapping off-take connections, on pressure (DI, CI, AC, MS, PE, PVC) and non-pressure pipe systems. Host pipe sizes from DN80mm upwards, that require a permanent BSP or flanged connection.

DN 15mm to DN 100mm BSP or DN 50mm to DN 100mm flanged sizes available.

- 1 Clean and remove any debris around the host pipe where the tapping saddle will be placed. Check for any pipe damage, if present relocate the saddle.
- 2 Disassemble the tapping saddle and install around the host pipe. Hand-tighten the nuts and position off-take as required.
- 3 Tension the nuts, evenly, uniformly, and keep gaps between segments equal. Do not fully tension one nut at a time, slowly tension nuts, moving from one nut to another, until **100-135Nm** is applied to all the nuts. Recheck the tension on all the nuts 10 minutes later, or when max. operating temperature is reach.
- 4 Mechanically support the off-take fittings separately to the tapping saddle.
- 5 It is recommended to pressure test the tapping saddle and fittings before drilling into the pipe.

R4 E&OE

APPENDIX B – QUALITY CERTIFICATIONS

Copies of the following Quality Certification Certificates are available for downloading from the WSAA members website.

TABLE B1

CASCADE SALES & DISTRIBUTION (PTY) LTD – MANAGEMENT SYSTEMS

183 Elsburg Road Dellville Ext 4 Germiston South Africa 1401South Africa	
Quality Systems Standard	ISO 9001:2015
Certification Licence No.	ZA17/209998
Certifying Agency	SGS
First Date of Certification	22 September 2017
Current Date of Certification	22 September 2020
Expiry Date of Certification	22 September 2023

TABLE B2

CASCADE SALES & DISTRIBUTION (PTY) LTD – PRODUCT CERTIFICATION

183 Elsburg Road Dellville Ext 4 Germiston South Africa 1401South Africa	
Product Standard/Spec.	AS/NZS 4129:2008
Certificate No.	AMI 74732
Issuing Certification Body	ApprovalMark International
First Date of Certification	30 May 2019
Current Date of Certification	30 May 2019
Expiry Date of Certification	30 May 2024


SGS

Certificate ZA17/209998

The management system of

**Cascade Sales & Distribution
(Pty) Ltd**

183 Elsberg Road, Delville Ext 4, Germiston, Gauteng, 1400, South Africa



has been assessed and certified as meeting the requirements of


ISO 9001:2015


For the following activities

Manufacture of stainless steel pipe repair clamps

This certificate is valid from 22 September 2017 until 22 September 2020
and remains valid subject to satisfactory surveillance audits.
Re certification audit due before 22 June 2020
Issue 1. Certified since 22 September 2017


Authorised by





C02a

SGS South Africa (Pty) Ltd,
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Page 1 of 1





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ISO TYPE 5

CERTIFICATE OF CONFORMITY



ApprovalMark International hereby grants:

Cascade Sales and Distribution (Pty) T/A Rapid Clamps

183 Elsburg Road, Delville Ext 4
Germiston, 1401
SOUTH AFRICA

Evaluated to:

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

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

Certificate No. AMI 74732

Issued: 30 May 2019
Expires: 30 May 2024

Original Issue: 30 May 2019

A handwritten signature in black ink that reads "John Prasad".

John PRASAD
Director



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



Product Schedule

Cascade Sales and Distribution (Pty) T/A Rapid Clamps

183 Elsburg Road, Delville Ext 4
Germiston, 1401
SOUTH AFRICA

ISO Type 5 Certificate of Conformity

Evaluated to:

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

Model Id	Model Name	Brand Name	Product Description	Endorsement Date
CT2-110-135 x 20BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 110 to 135 x 20mm BSP	30 th May 2019
CT2-110-135 x 25BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 110 to 135 x 25mm BSP	30 th May 2019
CT2-110-135 x 32BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 110 to 135 x 32mm BSP	30 th May 2019
CT2-110-135 x 40BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 110 to 135 x 40mm BSP	30 th May 2019
CT2-110-135 x 50BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 110 to 135 x 50mm BSP	30 th May 2019
CT2-135-160 x 20BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 135 to 160 x 20mm BSP	30 th May 2019
CT2-135-160 x 25BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 135 to 160 x 25mm BSP	30 th May 2019
CT2-135-160 x 32BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 135 to 160 x 32mm BSP	30 th May 2019
CT2-135-160 x 40BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 135 to 160 x 40mm BSP	30 th May 2019
CT2-135-160 x 50BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 135 to 160 x 50mm BSP	30 th May 2019
CT2-160-190 x 20BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 160 to 190 x 20mm BSP	30 th May 2019
CT2-160-190 x 25BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 160 to 190 x 25mm BSP	30 th May 2019
CT2-160-190 x 32BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 160 to 190 x 32mm BSP	30 th May 2019
CT2-160-190 x 40BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 160 to 190 x 40mm BSP	30 th May 2019
CT2-160-190 x 50BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 160 to 190 x 50mm BSP	30 th May 2019
CT2-190-220 x 20BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 190 to 220 x 20mm BSP	30 th May 2019
CT2-190-220 x 25BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 190 to 220 x 25mm BSP	30 th May 2019
CT2-190-220 x 32BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 190 to 220 x 32mm BSP	30 th May 2019



Product Schedule

Model Id	Model Name	Brand Name	Product Description	Endorsement Date
CT2-190-220 x 40BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 190 to 220 x 40mm BSP	30 th May 2019
CT2-190-220 x 50BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 190 to 220 x 50mm BSP	30 th May 2019
CT2-210-240 x 20BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 210 to 240 x 20mm BSP	30 th May 2019
CT2-210-240 x 25BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 210 to 240 x 25mm BSP	30 th May 2019
CT2-210-240 x 32BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 210 to 240 x 32mm BSP	30 th May 2019
CT2-210-240 x 40BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 210 to 240 x 40mm BSP	30 th May 2019
CT2-210-240 x 50BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 210 to 240 x 50mm BSP	30 th May 2019
CT2-240-270 x 20BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 240 to 270 x 20mm BSP	30 th May 2019
CT2-240-270 x 25BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 240 to 270 x 25mm BSP	30 th May 2019
CT2-240-270 x 32BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 240 to 270 x 32mm BSP	30 th May 2019
CT2-240-270 x 40BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 240 to 270 x 40mm BSP	30 th May 2019
CT2-240-270 x 50BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 240 to 270 x 50mm BSP	30 th May 2019
CT2-270-300 x 20BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 270 to 300 x 20mm BSP	30 th May 2019
CT2-270-300 x 25BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 270 to 300 x 25mm BSP	30 th May 2019
CT2-270-300 x 32BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 270 to 300 x 32mm BSP	30 th May 2019
CT2-270-300 x 40BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 270 to 300 x 40mm BSP	30 th May 2019
CT2-270-300 x 50BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 270 to 300 x 50mm BSP	30 th May 2019
CT2-300-330 x 20BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 300 to 330 x 20mm BSP	30 th May 2019
CT2-300-330 x 25BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 300 to 330 x 25mm BSP	30 th May 2019
CT2-300-330 x 32BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 300 to 330 x 32mm BSP	30 th May 2019
CT2-300-330 x 40BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 300 to 330 x 40mm BSP	30 th May 2019
CT2-300-330 x 50BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 300 to 330 x 50mm BSP	30 th May 2019
CT2-330-360 x 20BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 330 to 360 x 20mm BSP	30 th May 2019
CT2-330-360 x 25BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 330 to 360 x 25mm BSP	30 th May 2019
CT2-330-360 x 32BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 330 to 360 x 32mm BSP	30 th May 2019
CT2-330-360 x 40BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 330 to 360 x 40mm BSP	30 th May 2019



Product Schedule

Model Id	Model Name	Brand Name	Product Description	Endorsement Date
CT2-330-360 x 50BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 330 to 360 x 50mm BSP	30 th May 2019
CT2-75-90 x 20BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 75 to 90 x 20mm BSP	30 th May 2019
CT2-75-90 x 25BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 75 to 90 x 25mm BSP	30 th May 2019
CT2-88-108 x 20BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 88 to 108 x 20mm BSP	30 th May 2019
CT2-88-108 x 25BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 88 to 108 x 25mm BSP	30 th May 2019
CT2-88-108 x 32BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 88 to 108 x 32mm BSP	30 th May 2019
CT2-88-108 x 40BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 88 to 108 x 40mm BSP	30 th May 2019
CT2-88-108 x 50BSP	CT Tapping Saddle	Rapid	CT Tapping Saddle SS316 88 to 108 x 50mm BSP	30 th May 2019

End of record

Certificate No: AMI 74732

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

APPENDIX C - WSA PRODUCT SPECIFICATION

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.

UNCONTROLLED IF PRINTED

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October 2018

Doc Name: Product Specifications for Products & Materials

Page 1 of 1

APPENDIX D - SUPPLIER CONTACTS

Rapid Clamps are available through the following outlets:

Supplier	Phone
Rapid Clamps	07 3889 6262
Aust Water & Irrigation Solutions	03 97290121
Cadia Plumbing	1300 422 342
Reece	All stores
Tradelink	All stores
Klambon Water	02 8814 9699
Galvins Plumbing Supplies	08 9441 8544
Bentons Plumbing Supplies	03 9386 9022



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