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# AS/NZS 3500.1:2003 Plumbing and drainage - Water services

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Abbreviation

Citations

AS/NZS 3500.1:2003

Amendment

AS/NZS 3500.1:2003 A1 . - incorporated. Published 28/11/2005

Valid from

14/12/2003

Replaces

AS/NZS 3500.4.2:1997

Information provider

Standards New Zealand

Author

Standards New Zealand, Standards Australia

Information type

New Zealand Standard

Format

PDF

Cited By

This resource is cited by 21 documents (show Citations)

Cites

This resource cites 57 documents (show Citations)

#### Description

This Standard sets out the requirements for the installation of water services from the point of connection to the Network Utility's water supply or from an alternative drinking water supply to the points of discharge.

This Standard applies to new installations as well as alterations, additions and repairs to existing installations. Cited in Ministry's Simple House Acceptable Solution.

#### Scope

This Standard specifies the requirements for the design, installation and commissioning of cold water services from a point of connection to the points of discharge, and non-drinking water from a point of connection to the points of discharge. It applies to new installations as well as alterations, additions and repairs to existing installations. Illustrations used in this Standard are diagrammatic only and have been chosen without prejudice.

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G12/AS1 (Third Edition, Amendment 9)

AS/NZS 3500.1:2003 is cited by Acceptable Solution G12/AS1: Water Supplies from 01/12/2007

• SH/AS1 (First edition, unamended)

AS/NZS 3500.1:2003 is cited by SH/AS1 Simple House Acceptable Solution

G12/VM1 (Third Edition, Amendment 8)

AS/NZS 3500.1:2003 is cited by Verification Method G12/VM1: Water Supplies from 01/12/2007

• G12/VM1 (Third Edition, Amendment 7)

AS/NZS 3500.1:2003 is cited by Verification Method G12/VM1: Water Supplies from 01/12/2007

• G12/VM1 (Third Edition, Amendment 9)

AS/NZS 3500.1:2003 is cited by Verification Method G12/VM1: Water Supplies from 01/12/2007

AS 3688:2005

AS/NZS 3500.1:2003 is cited by AS 3688:2005 Water supply - Metallic fittings and end connectors

AS/NZS 2032:2006

AS/NZS 3500.1:2003 is cited by AS/NZS 2032:2006 Installation of PVC pipe systems

AS/NZS 2033:2008

AS/NZS 3500.1:2003 is cited by AS/NZS 2033:2008 Installation of polyethylene pipe systems

AS/NZS 2712:2007

AS/NZS 3500.1:2003 is cited by AS/NZS 2712:2007 Solar and heat pump water heaters - Design and construction

AS/NZS 2845.1:2010

AS/NZS 3500.1:2003 is cited by AS/NZS 2845.1:2010 Water supply - Backflow prevention devices - Part 1: Materials, design and performance requirements

AS/NZS 3500.2:2003

AS/NZS 3500.1:2003 is cited by AS/NZS 3500.2:2003 Plumbing and drainage - Sanitary plumbing and drainage

AS/NZS 3500.4:2003

AS/NZS 3500.1:2003 is cited by AS/NZS 3500.4:2003 Plumbing and drainage - Part 4: Heated water services

#### AS/NZS 3666.1:2011

AS/NZS 3500.1:2003 is cited by AS/NZS 3666.1:2011 Air-handling and water systems of buildings - Microbial Control - Design, installation and commissioning

# AS/NZS 3666.2:2011

AS/NZS 3500.1:2003 is cited by AS/NZS 3666.2:2011 Air-handling and water systems of buildings - Microbial Control - Operation and maintenance

#### AS/NZS 3690:2009

AS/NZS 3500.1:2003 is cited by AS/NZS 3690:2009 Installation of ABS pipe systems

#### AS/NZS 4765:2007

AS/NZS 3500.1:2003 is cited by AS/NZS 4765:2007 Modified polyvinyl chloride (PVC-M) pipes for pressure applications

#### AWWA C217-99

AS/NZS 3500.1:2003 is cited by AWWA C217-99 Standard for Cold-Applied Petrolatum Tape and Petroleum Wax Tape Coatings for the Exterior of Special Sections, Connections, and Fittings for Buried or Submerged Steel Water Pipelines

#### DoC backcountry hut manual 2009 (Version 4)

AS/NZS 3500.1:2003 is cited by Hut procurement manual for backcountry huts

#### NZ Backflow Testing Standard 2011

AS/NZS 3500.1:2003 is cited by NZ Backflow Testing Standard - Field testing of backflow prevention devices and verification of air gaps

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#### **New Zealand Standards**

#### AS/NZS 1167.2:1999

AS/NZS 3500.1:2003 cites AS/NZS 1167.2:1999 Welding and brazing - Filler metals - Filler metal for welding

#### AS/NZS 1260:2002

AS/NZS 3500.1:2003 cites AS/NZS 1260:2002 PVC-U pipes and fittings for drain, waste and vent application

#### AS/NZS 1477:1999

AS/NZS 3500.1:2003 cites AS/NZS 1477:1999 PVC pipes and fittings for pressure applications

#### AS/NZS 2280:1999

AS/NZS 3500.1:2003 cites AS/NZS 2280:1999 Ductile iron pressure pipes and fittings

# • AS/NZS 2544:1995

AS/NZS 3500.1:2003 cites AS/NZS 2544:1995 Grey iron pressure fittings

# AS/NZS 2642.2:1994

AS/NZS 3500.1:2003 cites AS/NZS 2642.2:1994 Polybutylene pipe systems - Part 2: Polybutylene (PB) pipe for hot and cold water applications

#### AS/NZS 2642.3:1994

AS/NZS 3500.1:2003 cites AS/NZS 2642.3:1994 Polybutylene pipe systems - Part 3: Mechanical jointing fittings for use with polybutylene pipes for hot and cold water applications

# • AS/NZS 2648.1:1995

AS/NZS 3500.1:2003 cites AS/NZS 2648.1:1995 Underground marking tape - Non-detectable tape

# • AS/NZS 2845.1:1998

AS/NZS 3500.1:2003 cites AS/NZS 2845.1:1998 Water supply - Backflow prevention devices - Part 1: Materials, design and performance requirements

# • AS/NZS 2865:2001

AS/NZS 3500.1:2003 cites AS/NZS 2865:2001 Safe working in a confined space

#### AS/NZS 2878:2000 (Reconfirmed in 2017)

AS/NZS 3500.1:2003 cites AS/NZS 2878:2000 Timber - Classification into strength groups

## • AS/NZS 3500.0:2003

AS/NZS 3500.1:2003 cites AS/NZS 3500.0:2003 Plumbing and drainage - Glossary of terms

#### AS/NZS 3500.4:2003

AS/NZS 3500.1:2003 cites AS/NZS 3500.4:2003 Plumbing and drainage - Part 4: Heated water services

#### AS/NZS 3879:1995

AS/NZS 3500.1:2003 cites AS/NZS 3879:1995 Solvent cements and priming fluids for use with unplasticized PVC (uPVC) pipes and fittings

# AS/NZS 4020:2002

AS/NZS 3500.1:2003 cites AS/NZS 4020:2002 Testing of products for use in contact with drinking water

## AS/NZS 4129:2000

AS/NZS 3500.1:2003 cites AS/NZS 4129:2000 Fittings for polyethylene (PE) pipes for pressure applications

# • AS/NZS 4130:2003

AS/NZS 3500.1:2003 cites AS/NZS 4130:2003 Polyethylene (PE) pipes for pressure applications

#### • AS/NZS 4331.1:1995

AS/NZS 3500.1:2003 cites AS/NZS 4331.1:1995 (R2016) Metallic flanges - Steel flanges

#### AS/NZS 4331.2:1995

AS/NZS 3500.1:2003 cites AS/NZS 4331.2:1995 (R2016) Metallic flanges - Cast iron flanges

#### AS/NZS 4331.3:1995

AS/NZS 3500.1:2003 cites AS/NZS 4331.3:1995 (R2016) Metallic flanges - Copper alloy and composite flanges

#### AS/NZS 4671:2001

AS/NZS 3500.1:2003 cites AS/NZS 4671:2001 Steel reinforcing materials

#### AS/NZS 4680:1999

AS/NZS 3500.1:2003 cites AS/NZS 4680:1999 Hot-dip galvanized (zinc) coatings on fabricated ferrous articles

# NZS 3109:1997

AS/NZS 3500.1:2003 cites NZS 3109:1997 Concrete construction

#### NZS 3501:1976

AS/NZS 3500.1:2003 cites NZS 3501:1976 Specification for copper tubes for water, gas, and sanitation

#### NZS 3640:2003

AS/NZS 3500.1:2003 cites NZS 3640:2003 Chemical preservation of round and sawn timber

# • NZS 4121:2001

AS/NZS 3500.1:2003 cites NZS 4121:2001 Design for access and mobility - Buildings and associated facilities

#### NZS 5807:1980

AS/NZS 3500.1:2003 cites NZS 5807:1980 Code of practice for industrial identification by colour, wording or other coding

# • NZS/BS 1387:1985

AS/NZS 3500.1:2003 cites NZS/BS 1387:1985 Specification for screwed and socketed steel tubes and tubulars and for plain end steel tubes suitable for welding or screwing to BS 21 pipe threads

# NZS/BS 3601:1987

AS/NZS 3500.1:2003 cites NZS/BS 3601:1987 Specification for carbon steel pipes and tubes with specified room temperature properties for pressure purposes

#### Australian Standards

# • <u>AS 1074:1989</u>

AS/NZS 3500.1:2003 cites AS 1074:1989 (R2018) Steel tubes and tubulars for ordinary service

#### AS 1172.2-1999

AS/NZS 3500.1:2003 cites AS 1172.2-1999 Water closet (WC) pans of 6/3 L capacity or proven equivalent - Part 2: Cisterns

# • AS 1319:1994

AS/NZS 3500.1:2003 cites AS 1319:1994 (R2018) Safety signs for the occupational environment

# • AS 1345-1995

AS/NZS 3500.1:2003 cites AS 1345-1995 (R2018) Identification of the contents of pipes, conduits and ducts

#### • AS 1379-1997

AS/NZS 3500.1:2003 cites AS 1379-1997 Specification and supply of concrete

#### AS 1397:2001

AS/NZS 3500.1:2003 cites AS 1397:2001 Steel sheet and strip - Hot-dipped zinc-coated or aluminium/zinc-coated

#### AS 1432:1996

AS/NZS 3500.1:2003 cites AS 1432-1996 Copper tubes for plumbing gasfitting and drainage applications

## AS 1478.1-2000 (Reconfirmed in 2018)

AS/NZS 3500.1:2003 cites AS 1478.1-2000 (R2018) Chemical admixtures for concrete, mortar and grout - Admixtures for concrete

#### AS 1604.1-2000

AS/NZS 3500.1:2003 cites AS 1604.1-2000 Specification for preservative treatment - Sawn and round timber

#### AS 1646.1-2000

AS/NZS 3500.1:2003 cites AS 1646.1-2000 Elastomeric seals for waterworks purposes - General requirements

#### AS 1646.2-2000

AS/NZS 3500.1:2003 cites AS 1646.2-2000 Elastomeric seals for waterworks purposes Material requirements for pipe joint seals used in water and wastewater applications - Specifies by prescription formulation

# • AS 1646.3-2000

AS/NZS 3500.1:2003 cites AS 1646.3-2000 Elastomeric seals for waterworks purposes - Material requirements for pipe joints seals used in water and wastewater applications with the exception of natural rubber and polyisoprene compounds

#### • AS 1657-1992

AS/NZS 3500.1:2003 cites AS 1657-1992 Fixed platforms, walkways, stairways and ladders - Design, construction and installation

#### AS 2129:2000

AS/NZS 3500.1:2003 cites AS 2129:2000 (R2016) Flanges for pipes valves and fittings

# • AS 2700-1996

AS/NZS 3500.1:2003 cites AS 2700-1996 Colour Standards for general purposes

#### AS 2845.3-1993

AS/NZS 3500.1:2003 cites AS 2845.3-1993 Water supply - Mechanical backflow prevention devices. Part 3: Field testing and maintenance

# AS 3518.1-1988

AS/NZS 3500.1:2003 cites AS 3518.1-1988 Acrylonitrile butadiene styrene (ABS) pipes and fittings for pressure applications - Part 1: Pipes

#### AS 3518.2-1988

AS/NZS 3500.1:2003 cites AS 3518.2-1988 Acrylonitrile butadiene styrene (ABS) pipes and fittings for pressure applications - Solvent cement fittings

• AS 3600-2001

AS/NZS 3500.1:2003 cites AS 3600-2001 Concrete structures

• AS 3688-1994

AS/NZS 3500.1:2003 cites AS 3688-1994 Water supply - Copper and copper alloy body compression and capillary fittings and threaded-end connectors

• AS 3795-1996

AS/NZS 3500.1:2003 cites AS 3795-1996 Copper alloy tubes for plumbing and drainage applications

AS 4087-1996

AS/NZS 3500.1:2003 cites AS 4087-1996 Metallic flanges for waterworks purposes

• AS 4176:1994

AS/NZS 3500.1:2003 cites AS 4176:1994 Polyethylene/aluminium and cross-linked polyethylene/aluminium macro-composite pipe systems for pressure applications

AS 4441(Int)-2003

AS/NZS 3500.1:2003 cites AS 4441(Int)-2003 Oriented PVC (PVC-O) pipes for pressure applications

AS 4809:2003

AS/NZS 3500.1:2003 cites AS 4809:2003 Copper pipe and fittings - Installation and commissioning

Other

AWWA C217-99

AS/NZS 3500.1:2003 cites AWWA C217-99 Standard for Cold-Applied Petrolatum Tape and Petroleum Wax Tape Coatings for the Exterior of Special Sections, Connections, and Fittings for Buried or Submerged Steel Water Pipelines

AWWA C651-99

AS/NZS 3500.1:2003 cites AWWA C651-99 Standard for Disinfecting Water Mains

BS EN 10312:2002

AS/NZS 3500.1:2003 cites BS EN 10312:2002 Welded stainless steel tubes for the conveyance of aqueous liquids including water for human consumption. Technical delivery conditions



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