



**Stainless steel tubes and tube fittings
for food processing and hygienic
applications**

Part 4: Clamp tube fittings

STANDARDS
Australia



AS 1528.4:2019

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- Australian Chamber of Commerce and Industry
- Australian Food Engineering Association
- Australian Industry Group
- Australian Stainless Steel Development Association
- Dairy Australia
- Winery Engineering Association

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Stainless steel tubes and tube fittings for food processing and hygienic applications

Part 4: Clamp tube fittings

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Preface

This Standard was prepared by the Standards Australia Committee FT-027, Stainless Steel Tubes and Tube Fittings for Food Processing and Hygienic Applications, to supersede AS 1528.4—2001, *Tubes (stainless steel) and tube fittings for the food industry, Part 4: Clamp liners with gaskets*.

The objective of this Standard is to specify the materials, dimensions, and surface finish requirements for welded-type and expanded-type clamp tube fittings, comprising clamps, clamp liners (ferrules), end caps and gaskets in tube couplings for effecting joins in pipelines in food processing and hygienic applications.

This is Part 4 of a series of Standards for stainless steel tubes and tube fittings for food processing and hygienic applications. The Standards in the series are as follows:

AS 1528.1, *Stainless steel tubes and tube fittings for food processing and hygienic applications, Part 1: Tubes*

AS 1528.2, *Stainless steel tubes and tube fittings for food processing and hygienic applications, Part 2: Screwed tube couplings*

AS 1528.3, *Stainless steel tubes and tube fittings for food processing and hygienic applications, Part 3: Butt weld tube fittings*

AS 1528.4, *Stainless steel tubes and tube fittings for food processing and hygienic applications, Part 4: Clamp tube fittings* (this Standard)

This revision of the AS 1528 series closely aligns with other national and international Standards applicable to stainless steel tube and tube fittings for hygienic applications, while retaining a number of requirements that were identified in the prefaces to the 2001 editions as lacking in ASTM and ISO Standards.

ISO, European and other national Standards were reviewed and found not suitable for current Australian requirements.

Major changes to this Standard in the current revision include the following:

- (a) The title of the Standard was changed to include “hygienic applications” in recognition of a broader application than simply the food processing industry.
- (b) Common internal surface requirements for all parts of the Standard.
- (c) Closer alignment of tolerances with International, European and US-based Standards.
- (d) Expansion of the diameter range and inclusion of wall thicknesses common to various tube diameters.
- (e) Expanded range of dimensions for welded-type clamp liners and gaskets.
- (f) Addition of end caps, now standard for the intended applications.

The terms “normative” and “informative” are used in Standards to define the application of the appendices to which they apply. A “normative” appendix is an integral part of a Standard, whereas an “informative” appendix is only for information and guidance.

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Australian Standard®

Stainless steel tubes and tube fittings for food processing and hygienic applications

Part 4: Clamp tube fittings

1 Scope

This Standard specifies requirements for welded-type and expanded-type clamp tube fittings, comprising clamps, clamp liners (ferrules), end caps and gaskets in tube couplings for effecting joins in pipelines in food processing and hygienic applications. Requirements for materials, dimensions, and surface finish are specified.

Dimensions for a clamp coupling assembly are specified in [Appendix B](#).

Clamp liners in tube couplings for food processing and hygienic applications are intended to be used with stainless steel tubes in accordance with AS 1528.1 and fittings in accordance with AS 1528.2 and AS 1528.3.

NOTE Information to be supplied for purchase is given in [Appendix A](#).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document.

AS 1528.1, *Stainless steel tubes and tube fittings for food processing and hygienic applications, Part 1: Tubes*

AS 1528.2, *Stainless steel tubes and tube fittings for food processing and hygienic applications, Part 2: Screwed tube couplings*

AS 1528.3, *Stainless steel tubes and tube fittings for food processing and hygienic applications, Part 3: Butt weld tube fittings*

AS/NZS 1554.6, *Structural steel welding, Part 6: Welding stainless steel for structural purposes*

ISO 4288, *Geometrical Product Specifications (GPS) — Surface texture: Profile method — Rules and procedures for the assessment of surface texture*

ASTM A182M, *Standard Specification for Forged or Rolled Alloy and Stainless Steel Pipe Flanges, Forged Fittings, and Valves and Parts for High-Temperature Service*

ASTM A240M, *Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications*

ASTM A276M, *Standard Specification for Stainless Steel Bars and Shapes*

ASTM A311M, *Standard Specification for Castings, Austenitic, for Pressure-Containing Parts*

AWSD18.1M, *Specification for Welding of Austenitic Stainless Steel Tube and Pipe Systems in Sanitary (Hygienic) Applications*

EN 10204, *Metallic products — Types of inspection documents*

3 Terms and definitions

For the purposes of this Standard the following definitions apply: