

# Stainless Steel Hygienics Guide

## 1. What are Hygienics?

- ◆ Stainless Steel Hygienics is the name given to a range of tube and fittings used in applications requiring a clean and sanitary flow of liquids and where it is essential to avoid contamination of the products being carried.
- ◆ These applications cover the food processing, beverage, biotech and pharmaceutical industries including breweries and dairies.
- ◆ The applications are low pressure with a maximum of 150lbs.
- ◆ The products are available in grades 304L and 316L.
- ◆ The size range is from ¾ inch to 4 inch O/D.
- ◆ The tube and fittings are of welded construction with the internal bead rolled to flatten it and eliminate crevices, thus preventing interruptions to the flow and eliminating the risk of contamination or bug traps as well as facilitate easy cleaning.
- ◆ The tube and fittings are offered with a choice of external finishes:
  - Descaled
  - Bright Annealed
  - Dull Polished
  - Semi-Bright or Bright Polished.

## 2. What is the manufacturing standard?

- ◆ Hygienic tubes are manufactured to ASTM A270, DIN 11850 and BS 4825 Part 1.
- ◆ Hygienic fittings are manufactured to BS4825 Parts 2 to 5. (EN20286)

## 3. What markings will be on the tube and fittings?

Tube and fittings with a bright annealed or polished finish will be unmarked.

## 4. What is the size range?

### Sizes to ASTM A270

O/D in	Wall Swg / mm
¾	16 / 1.63
1	16 / 1.63
1½	16 / 1.63
2	16 / 1.63
2½	16 / 1.63
3	16 / 1.63
4	16 / 1.63
4	14 / 2.03

### Sizes to DIN 11850

O/D in	Wall mm
1	1.5
1½	1.5
2	1.5
2½	1.5
3	1.5
4	2.0

*This information is based on our present knowledge and is given in good faith. However, no liability will be accepted by the Company in respect of any action taken by any third party in reliance thereon. As the products detailed may be used for a wide variety of purposes and as the Company has no control over their use; the Company specifically excludes all conditions or warranties expressed or implied by statute or otherwise as to dimensions, properties and/or fitness for any particular purpose. Any advice given by the Company to any third party is given for that party's assistance only and without liability on the part of the Company. Any contract between the Company and a customer will be subject to the Company's Conditions of Sale. The extent of the Company's liabilities to any customer is clearly set out in those Conditions; a copy of which is available on request*


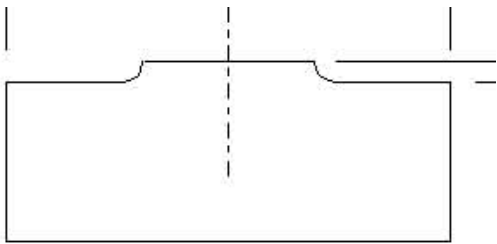
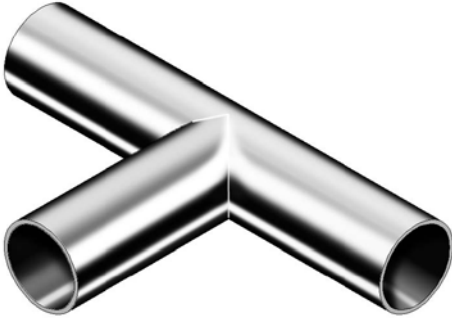
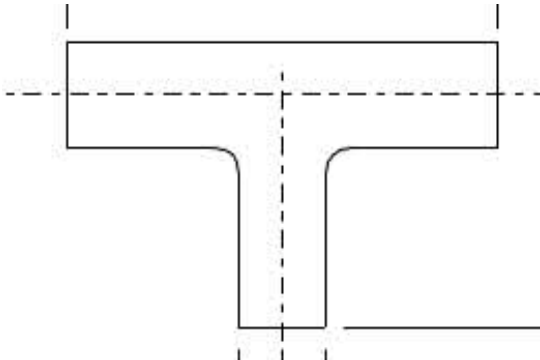


**Amari is a registered trademark of Amari Metals Ltd**

© Copyright: Amari Metals Ltd, 25 High Street, Cobham, Surrey, KT11 3DH

All Data is indicative only and must not be seen as a substitute for the full specification from which it is drawn. In particular, the mechanical property requirements vary widely with temper, product form and product dimensions. For more complete details please refer to the relevant specification.

## 5. What is the range of fittings?

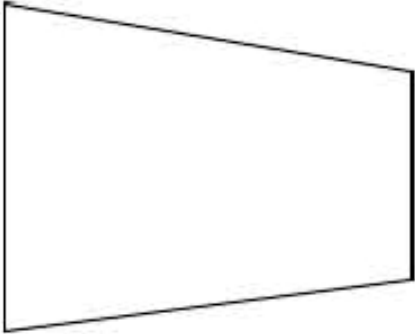
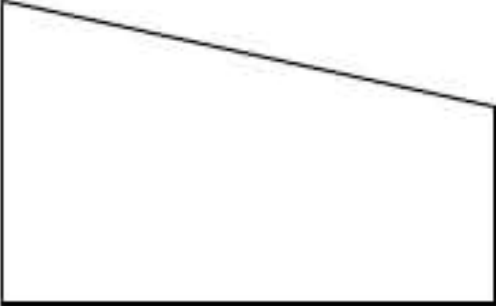
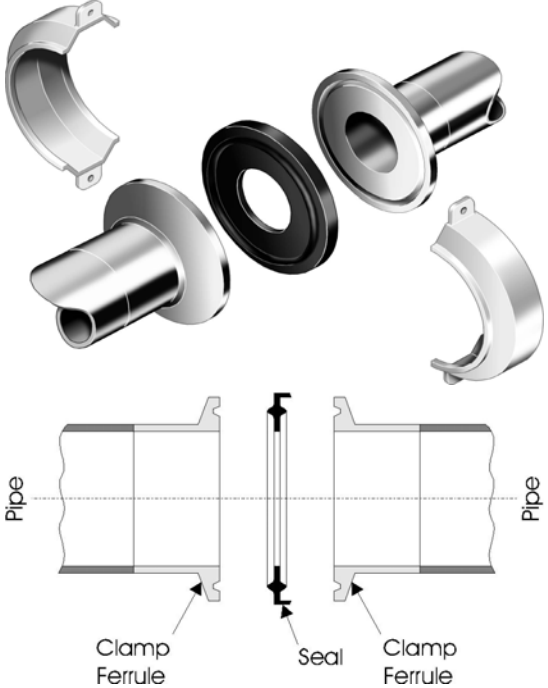
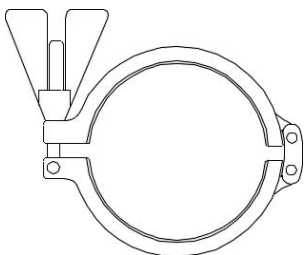
Fitting	Notes
<b>Bends – 45 Degree, 90 Degree Bends &amp; 180 Degree Returns</b>	
	
<b>Pulled Tees</b>	
	<p>Pulled tees have a very short T-piece that is unsuitable for automated machine orbital welding so they can only be hand welded.</p> <p>For orbital machine welding a full tee must be used.</p>
<b>Full Tees</b>	
	<p>Full tees can be welded by hand or on automated orbital welding machines</p>
<b>Reducing Tees</b>	
	




*Amari is a registered trademark of Amari Metals Ltd*

© Copyright: Amari Metals Ltd, 25 High Street, Cobham, Surrey, KT11 3DH

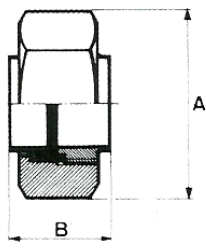
All Data is indicative only and must not be seen as a substitute for the full specification from which it is drawn. In particular, the mechanical property requirements vary widely with temper, product form and product dimensions. For more complete details please refer to the relevant specification.

<b>Reducers – Concentric &amp; Eccentric</b>	
	
<i>Concentric</i>	<i>Eccentric</i>
<b>Seals – Material of Manufacture</b>	
	The most common materials used for the manufacture of seals are Nitrile Rubber and EPDM
<b>Clamps</b>	
	<p>These comprise four parts – 2 Weld Ferrules, a Gasket and a Clamp.</p> <p>They are particularly used in systems carrying warm semi-solids and viscous liquids such as chocolate and tomato sauce, which must not cool in the line, but tend to form regular blockages. Such systems tend to need to be opened up quickly and often. The clamp will have some form of closure device such as a 'Triclover' clamp:</p> 
<b>DIN Union</b>	
	The DIN Union is rarely used in the UK. The preferred unions are the RJT (Ring Joint Type) and IDF (International Dairy Federation) types

	<p><i>Amari is a registered trademark of Amari Metals Ltd</i></p> <p>© Copyright: Amari Metals Ltd, 25 High Street, Cobham, Surrey, KT11 3DH</p>
---	--

All Data is indicative only and must not be seen as a substitute for the full specification from which it is drawn. In particular, the mechanical property requirements vary widely with temper, product form and product dimensions. For more complete details please refer to the relevant specification.

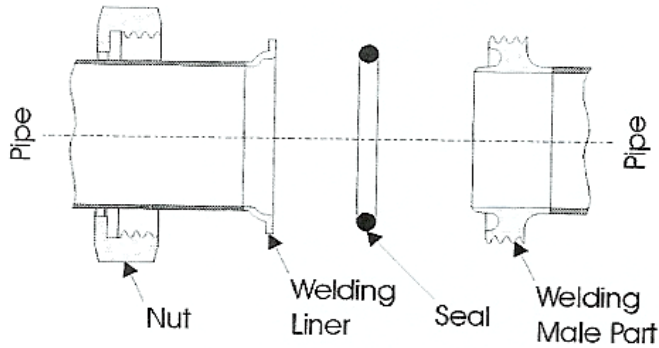
## RJT Union



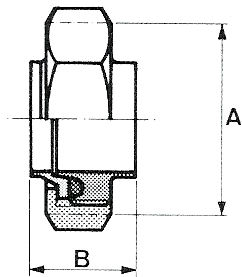
The Ring Joint Type (RJT) Union comprises four parts: - Nut - Liner - Seal - Male Part.

Primarily used where tubes are frequently disassembled for cleaning.

The seal is of an 'O Ring' type and is made of Nitrile:



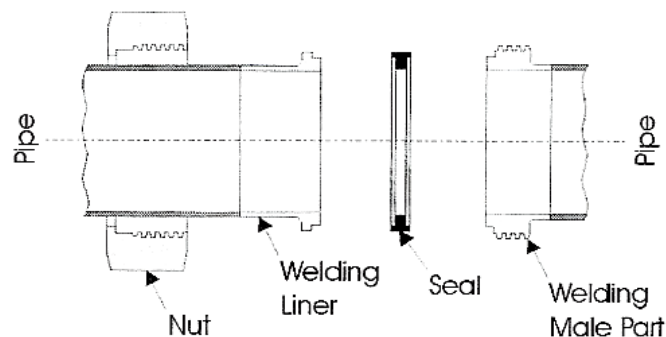
## IDF Union



The International Dairy Federation (IDF) Union comprises four parts: Nut - Liner - Seal - Male Part. Here the liner is machined and the seal is a square section. It has a thicker nut than the RJT and a more substantial liner. It is machined rather than pressed. It is considered easier to use.

The IDF has a smoother and cleaner flow line that is free of crevices and bug traps. It is used where CIP (Clean In Place) systems prevail, with the RJT only tends to be used where very regular access is needed.

The IDF seal has a square section and is more substantial than the RJT. It is made of Nitrile or EPDM:



*Amari is a registered trademark of Amari Metals Ltd*

© Copyright: Amari Metals Ltd, 25 High Street, Cobham, Surrey, KT11 3DH

All Data is indicative only and must not be seen as a substitute for the full specification from which it is drawn. In particular, the mechanical property requirements vary widely with temper, product form and product dimensions. For more complete details please refer to the relevant specification.