LONYOU

TECHNICAL DATASHEET

1. Description

Adjustable Ear Clamps are a type of hose clamp designed to provide a secure and tamper-resistant seal on hoses or tubing. They feature a band with one or more protruding "ears" and a unique multi-position interlock mechanism. This interlock allows the clamp to be adjusted to several nominal diameters before the final crimping of the ear(s). Once the desired diameter is selected by engaging the interlock, a specialized pincer tool is used to crimp the ear(s), drawing the band tight and creating a permanent, uniform seal around the hose. This adjustability makes them versatile for applications where exact hose diameters might vary or where a single clamp size needs to cover a wider range of applications.

2. Key Features

- **Adjustable Diameter Range:** The key feature is the multi-position interlock, allowing one clamp to be adjusted to several nominal diameters before final crimping.
- **Tamper-Resistant Connection:** Once the ear(s) are crimped, the connection is permanent and cannot be easily loosened or removed without destroying the clamp.
- **Secure Sealing:** Designed to provide effective and powerful all-round sealing.
- Simple and Fast Installation: With the correct pincer tool, installation is quick and straightforward.
- **Visible Deformation of Ear:** The crimped ear provides visual evidence of proper closure.
- **Smooth Band Edges & Inner Ring (Often):** Many designs feature burr-free strip edges and sometimes an inner ring with radial guidance to reduce the risk of damage to the hose and ensure uniform compression.
- **Vibration Resistance:** The permanent crimp offers good resistance to loosening under vibration.
- **Cost-Effective for Versatile Applications:** The ability to cover multiple diameters can reduce inventory needs.

3. Associated Products

- Single Ear Hose Clamp Pliers (Pincers): Specialized tools required for proper installation. Various types exist:
  - Standard Jaw Pincers
  - Side Jaw Pincers (for access in tight spaces)
  - Pneumatic Pincers (for production environments)
- Hoses (rubber, plastic, silicone, PEX)
- Fittings (barbed, insert)

4. Technical Data

- **Type:** Adjustable Ear Hose Clamp / Multi-Position Interlock Ear Clamp
- **Common Materials:**
  - Stainless Steel 304 (W4, Material No. 1.4301/UNS S30400) - Offers good corrosion resistance for general applications.
  - Stainless Steel 430 - Another stainless steel grade used by some manufacturers.
- **Band Widths (Typical):**7.0 mm, 8.0 mm, 9.0 mm.
- **Band Thickness (Typical):**0.5 mm, 0.6 mm, 0.8 mm.
- **Interlock Mechanism:** Multi-position interlock, often with load-retaining hooks and a lock tab. Can have, for example, 5 or 6 adjustable positions.
- **Clamping Diameter Range:**
  - Available in various sizes, each offering a range of adjustable diameters.
  - Examples of ranges: 25mm - 50mm, 40mm - 110mm, 43.6mm - 50mm, 65.5mm - 74mm.
  - Each incremental step of the interlock typically reduces the diameter by a set amount (e.g., approx. 1.6 mm).
- **Lock Type:** Often described as Outside Interlock or Inside Interlock.
- **Corrosion Resistance:**
  - Dependent on material. Stainless steel (e.g., AISI 304) offers good resistance.
  - Some may be rated according to DIN EN ISO 9227 (salt spray test), e.g., ≥ 1000 hours.
- **RoHS Compliant:** Often indicated by manufacturers.

5. Common Applications

- **Automotive:** Securing hoses for fuel lines, coolant systems, air lines, CVJ boots, and vacuum lines where diameter variability or a secure, tamper-proof seal is needed.
- **Plumbing:** Connecting various types of tubing.
- **Industrial Machinery:** Securing hoses in pneumatic or low-pressure hydraulic systems.
- **Agriculture:** Fastening hoses on various types of equipment.
- **Marine:** (Stainless steel versions recommended) for various hose connections.
- **White Goods/Appliances:** Internal hose connections.
- Applications where a wide diameter range is beneficial or where tube/hose circumference might be unknown until on-site.

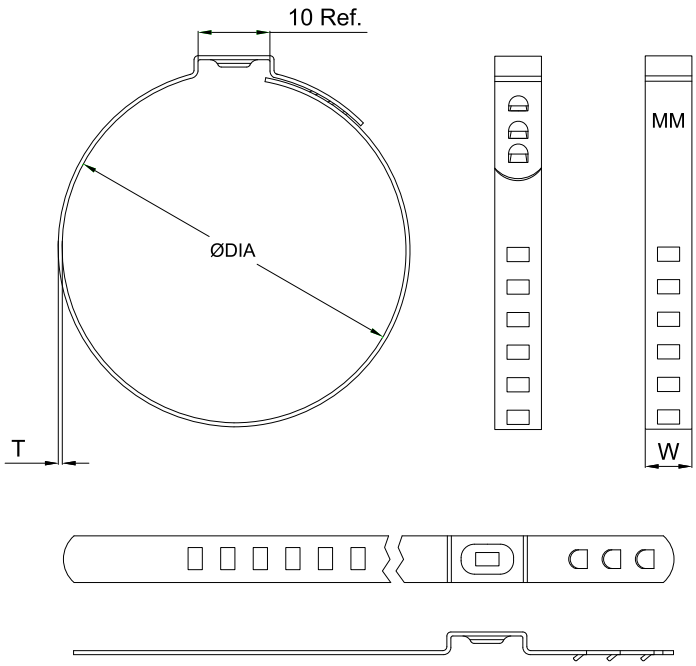
6. Installation Guidance

- **Select Approximate Diameter:** Choose an adjustable ear clamp where the hose's outside diameter (OD) with the fitting inserted falls within the clamp's overall adjustment range.
- **Shape Clamp (if supplied flat):** Some adjustable ear clamps are supplied flat and need to be formed into a circular shape.
- **Engage Interlock:** Adjust the clamp to the desired nominal diameter by selecting the appropriate engagement position on the multi-position interlock. Ensure the load-retaining hooks are securely engaged.
- **Position the Clamp:** Slide the adjusted clamp over the end of the hose.
- **Attach Hose to Fitting:** Push the hose fully onto the barbed or plain end fitting.
- **Position Clamp Correctly:** Slide the clamp over the section of the hose that covers the fitting's sealing area.
- **Crimp the Ear:**
  - Place the jaws of the specialized ear clamp pliers around the "ear" (or ears, if a double-ear adjustable design, though single ear is more common for adjustable types).
  - Squeeze the plier handles firmly and in a single, smooth motion until the ear is fully compressed according to the manufacturer's specifications. The visible deformation of the ear provides evidence of proper closure.
  - Avoid over-crimping or multiple crimps on the same ear.
- **Inspect the Crimp:** Visually inspect the crimped ear to ensure it is uniformly deformed and the clamp is providing even pressure around the hose.

7. Maintenance & Safety

- **Single Use (Generally):** Like standard ear clamps, adjustable ear clamps are typically designed for a single, permanent installation. Once crimped, removal usually requires destructive means, making them non-reusable.
- **Proper Tool Usage:** The correct specialized pincer tool must be used for crimping to ensure a secure and reliable connection.
- **Material Compatibility:** Ensure the clamp material is suitable for the operating environment (temperature, chemicals, moisture).
- **Correct Size Selection:** While adjustable, it's important to choose a clamp whose overall range is appropriate for the application to ensure optimal performance.
- **Safety Equipment:** Always wear safety glasses during installation and removal, as metal parts can spring or fragment. Gloves are advisable.

8. Specifications



Adjustable Ear Clamps

Code	Diameter (mm)	Width (mm)	Thickness (mm)	Code	Diameter (mm)	Width (mm)	Thickness (mm)
ASE32	10-32	7	0.6	ASE85	65-85	7	0.6
ASE40	20-40	7	0.6	ASE90	70-90	7	0.6
ASE45	25-45	7	0.6	ASE95	75-95	7	0.6
ASE50	30-50	7	0.6	ASE100	80-100	7	0.6
ASE55	35-55	7	0.6	ASE105	85-105	7	0.6
ASE60	40-60	7	0.6	ASE110	90-110	7	0.6
ASE65	45-65	7	0.6	ASE120	100-120	7	0.6
ASE70	50-70	7	0.6	ASE130	110-130	7	0.6
ASE75	55-75	7	0.6	ASE140	120-140	7	0.6
ASE80	60-80	7	0.6	ASE150	130-150	7	0.6

Optional Band Size: 8*0.6mm, 8*0.8mm, 9*0.8mm

Disclaimer: This datasheet provides general information typical for Adjustable Ear Clamps. Specific technical data, materials, performance characteristics, number of adjustment positions, and precise clamping ranges can vary significantly between different manufacturers and product lines. Always refer to the manufacturer's official documentation and specifications for the particular adjustable ear clamp being considered or used.