

1. Description



American Type Hose Clamps, also commonly known as worm gear clamps or worm drive clamps, are a widely used fastening solution designed to secure hoses onto fittings, preventing leakage of fluids or gases. They consist of a circular band, typically made of stainless steel or carbon steel, with a series of rectangular perforations (slots). A worm gear mechanism, housed in a small casing and operated by a screw, engages with these perforations. As the screw is tightened, it pulls the band, causing the clamp to constrict around the hose, providing a tight and reliable seal. These clamps are popular due to their versatility, ease of use, and effectiveness in a broad range of applications, including automotive, plumbing, industrial, agricultural, and household uses.

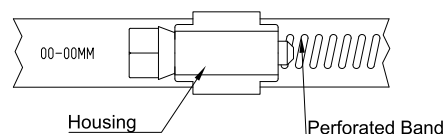
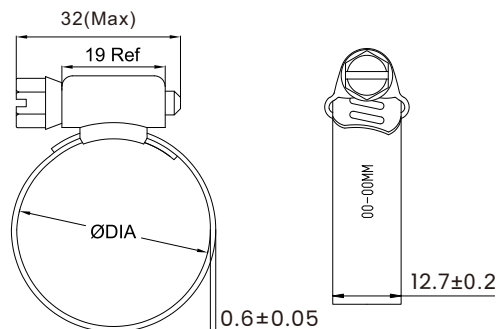
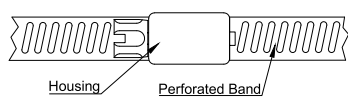
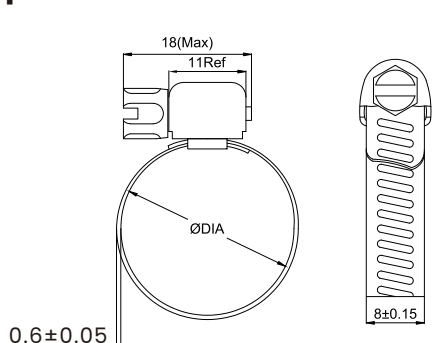
2. Key Features

- **Worm Gear Mechanism:** Allows for smooth, gradual, and precise tightening, ensuring optimal clamping force without damaging the hose.
- **Perforated Band:** The clean punched rectangular perforations in the band provide a strong grip and secure engagement with the screw's threads.
- **Adjustable Diameter:** Can be easily adjusted to fit a wide range of hose diameters.
- **Ease of Installation:** Can be installed and tightened using common tools like a screwdriver (flathead or hex) or a nut driver. Some versions come with a thumb screw or handle for tool-free operation.
- **Reusable:** Can often be loosened and retightened multiple times if needed.
- **Good Sealing Pressure:** Provides a consistent and reliable seal around the hose.
- **Versatility:** Suitable for various types of hoses (rubber, silicone, plastic) and applications.
- **Rounded Band Edges (often):** Helps prevent the clamp from cutting into or damaging the hose material during tightening and use.
- **Cost-Effective:** Generally an economical solution for hose securement.
- **Vibration Resistance:** Offers good resistance to loosening under vibration in many applications.

3. Technical Data

- **Type:** Worm Gear / Worm Drive Hose Clamp
- **Common Materials:**
 - **Band & Housing:**
 - Stainless Steel 201, 301, 304, 316 for varying degrees of corrosion resistance.
 - Carbon Steel (often zinc-plated for corrosion resistance).
 - **Screw:**
 - Carbon Steel (typically zinc-plated).
 - Stainless Steel (e.g., SS201, SS301, SS304, Ss316).
 - **Material Designations:**
 - W1: All parts (band, housing, screw) are zinc-plated carbon steel.
 - W2: Band and housing are stainless steel ; screw is zinc-plated carbon steel.
 - W4: All parts (band, housing, screw) are stainless steel (typically 304 grade or equivalent).
 - W5: All parts (band, housing, screw) are 316 grade stainless steel (for high corrosion resistance).
- **Band Widths (Common):** 8mm (5/16"), 12.7mm (1/2"), 14.2mm (9/16")
- **Band Thickness (Typical):** 0.6mm (0.023"), 0.7mm (0.027"), 0.8mm
- **Screw Head Type (Common):**
 - Hexagonal Head (often slotted for use with a flathead screwdriver or hex driver). Common hex sizes include 5/16" (8mm) or 1/4" (6mm/7mm).
 - Thumb Screw / Handle (for tool-free operation on some models).
- **Clamping Diameter Range:**
 - Available in a very wide range of sizes, from small diameters (e.g., 6-10mm or 1/4"-3/8") up to very large diameters (e.g., 250mm-300mm or 10"-12" and beyond).
 - Sizes are often specified by their minimum and maximum clamping diameter (e.g., 21-44mm or 13/16" - 1-3/4").
 - SAE (Society of Automotive Engineers) sizes are often referenced: SAE Size 6, 10, 20, 36, etc.
- **Recommended Installation Torque:**
 - Varies by band width and manufacturer.
 - For 8mm band width: Typically around 1.8 Nm to ≥ 2 Nm.
 - For 12.7mm band width: Typically around 4.5 Nm to ≥ 7 Nm (can be higher for heavy-duty versions).
- **Relevant Standards:** DIN 3017, ANSI/SAE J1508 or SAE J1670.
- **Surface Treatment (for carbon steel components):**
 - Zinc-plated (galvanized) for corrosion resistance.
 - Polishing (for stainless steel components).

6. Specifications



Code	SAE	Band Width (mm)	Thickness (mm)	Clamping Range		Material
				inch	mm	
AH12	-	8	0.6	1/2	8-12	W1/W2/W4/W5
AH16	04	8	0.6	5/8	10-16	W1/W2/W4/W5
AH19	05	8	0.6	3/4	13-19	W1/W2/W4/W5
AH23	06	8	0.6	7/8	13-23	W1/W2/W4/W5
AH25	08	8	0.6	1	16-25	W1/W2/W4/W5
AH27	10	12.7	0.6	1-1/16	14-27	W1/W2/W4/W5
AH32	12	12.7	0.6	1-1/4	18-32	W1/W2/W4/W5
AH38	16	12.7	0.6	1-1/2	21-38	W1/W2/W4/W5
AH44	20	12.7	0.6	1-3/4	21-44	W1/W2/W4/W5
AH51	24	12.7	0.6	2	27-51	W1/W2/W4/W5
AH57	28	12.7	0.6	2-1/4	33-57	W1/W2/W4/W5
AH64	32	12.7	0.6	2-1/2	40-64	W1/W2/W4/W5
AH70	36	12.7	0.6	2-3/4	46-70	W1/W2/W4/W5
AH76	40	12.7	0.6	3	52-76	W1/W2/W4/W5
AH83	44	12.7	0.6	3-1/4	59-83	W1/W2/W4/W5
AH89	48	12.7	0.6	3-1/2	65-89	W1/W2/W4/W5
AH95	52	12.7	0.6	3-3/4	72-95	W1/W2/W4/W5
AH101	56	12.7	0.6	4	78-101	W1/W2/W4/W5
AH108	60	12.7	0.6	4-1/4	84-108	W1/W2/W4/W5
AH114	64	12.7	0.6	4-1/2	91-114	W1/W2/W4/W5
AH127	72	12.7	0.6	5	105-127	W1/W2/W4/W5
AH140	80	12.7	0.6	5-1/2	117-140	W1/W2/W4/W5
AH153	88	12.7	0.6	6	130-153	W1/W2/W4/W5
AH165	96	12.7	0.6	6-1/2	142-165	W1/W2/W4/W5
AH178	104	12.7	0.6	7	155-178	W1/W2/W4/W5

Disclaimer: This datasheet provides general information typical for American Type Hose Clamps. Specific technical data, materials, and performance characteristics can vary significantly between different manufacturers and specific product lines. Always refer to the manufacturer's official documentation and specifications for the particular hose clamp being considered or used.