

1. Description



German Type Hose Clamps are a robust and widely used style of worm drive clamp, engineered for providing a secure and leak-proof connection between a hose and a fitting. Characterized by their precision engineering, these clamps typically feature a non-perforated (solid) band with embossed or pressed threads (sometimes described as "wolf teeth" for their appearance and grip) on the outer surface. This design offers a smooth inner surface to protect the hose from damage during tightening and use. The worm gear mechanism, with a captive screw, engages these external threads, allowing for high clamping forces and a reliable seal. German type clamps are known for their durability, high torque capabilities, and suitability for a broad range of applications, including automotive (fuel lines, coolant hoses, air intake systems), industrial machinery, agriculture, plumbing, and marine environments. They are often manufactured in accordance with DIN 3017.

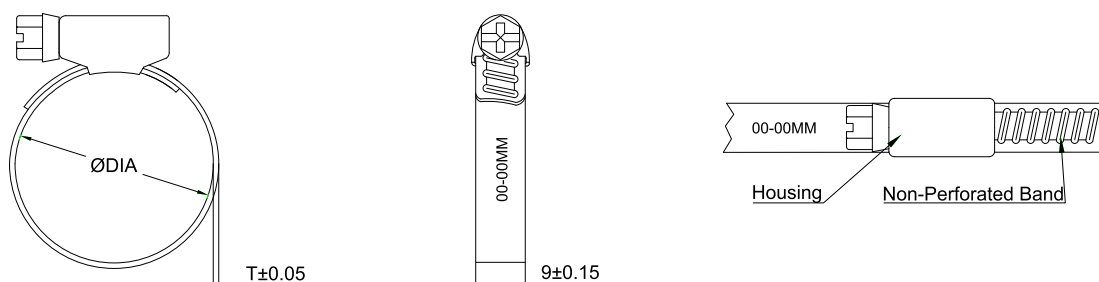
2. Key Features

- **Worm Drive Mechanism:** Provides strong, reliable, and precise tightening.
- **Non-Perforated Band (Typically):** The band is usually solid (unslotted) with threads embossed or pressed on the outside. This provides a smooth inner surface that is gentle on the hose, reducing the risk of extrusion, shearing, or damage, especially with softer hose materials.
- **Rolled Band Edges:** Smooth, rounded edges on the band further protect the hose from abrasion and cutting.
- **High Clamping Force and Torque:** Engineered to achieve higher tightening torques and provide a strong, consistent clamping force compared to some other clamp types.
- **Durable Housing:** The screw housing is securely attached to the band (often through welding or a robust mechanical interlock) to withstand high tightening forces.
- **Vibration Resistance:** Offers good resistance to loosening under conditions of vibration.
- **Corrosion Resistance:** Available in various materials, including different grades of stainless steel, providing excellent resistance to corrosion in harsh environments.
- **Conformity to Standards:** Often manufactured in compliance with DIN 3017, a German standard that specifies dimensions, materials, and performance characteristics for hose clamps.
- **Wide Range of Applications:** Suitable for demanding applications in automotive, industrial, marine, and agricultural sectors.
- **Material and Clamping Range Stamped on Band:** Often, key information like material grade and the clamp's diameter range are stamped directly onto the band for easy identification.
- **"Wolf Teeth" Design:** The embossed threads on the band are sometimes referred to as "wolf teeth," designed to reduce clamping chafing and improve grip.

3. Technical Data

- **Type:** Worm Drive Hose Clamp (German DIN 3017 Type)
- **Common Materials:**
 - **Band & Housing:**
 - Carbon Steel (Mild Steel), typically zinc-plated for corrosion resistance (e.g., W1 material).
 - Stainless Steel 430, 304, 316 .
 - **Screw:**
 - Carbon Steel (typically zinc-plated).
 - Stainless Steel (grades corresponding to W4/W5 classifications).
- **Material Designations (Common W-Grades according to DIN 3017):**
 - **W1:** All parts (band, housing, screw) are zinc-plated carbon steel.
 - **W2:** Band and housing are stainless steel; screw is zinc-plated carbon steel.
 - **W3:** All parts are stainless steel 430, screw often a free-machining stainless steel.
 - **W4:** All parts are stainless steel 304.
 - **W5:** All parts are high-grade stainless steel 316 for maximum corrosion resistance.
- **Band Widths (Common):** 9mm, 12mm
- **Band Thickness (Typical):** 0.6mm, 0.7mm or 0.8mm.
- **Screw Head Type (Common):** Hexagonal Head (typically 6mm or 7mm A/F – Across Flats), often with a slot for a flathead screwdriver.
- **Clamping Diameter Range:**
 - Available in a comprehensive range of sizes, from very small (e.g., 8-12mm) to large diameters (e.g., 140-160mm, with some extending to 200mm+ or even larger for special applications).
 - Sizes are specified by their minimum and maximum clamping diameter (e.g., 12-22mm, 25-40mm, 40-60mm).
- **Recommended Installation Torque / Breaking Torque:**
 - Free Running Torque (typical): ≤ 1 Nm.
 - Recommended Installation Torque (varies by size, band width, and material grade):
 - For 9mm band width: Typically 3 Nm to 5 Nm.
 - For 12mm band width: Typically 5 Nm to 7 Nm or higher (e.g., 6.5 Nm is often cited).
 - Breaking torque is significantly higher, indicating the clamp's ultimate strength.
- **Relevant Standards:**
 - DIN 3017: The primary German standard defining the requirements for worm drive hose clamps. Compliance with this standard is a key feature.
 - May also meet RoHS & REACH standards regarding material composition.
- **Surface Treatment:**
 - Zinc-plating (for W1 and W2 screw components) for corrosion protection.
 - Passivation or natural finish for stainless steel components.

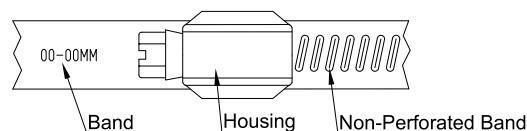
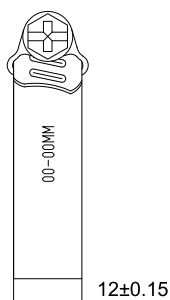
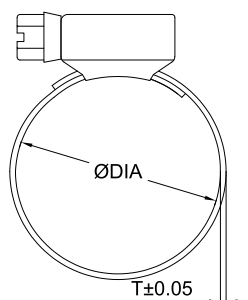
6. Specifications



Code	Width (mm)	Thickness (mm)	Diameter Range		Material
			mm	inch	
GHA12	9.0	0.7	8-12	5-16~1/2	W1/W2/W4
GHA16	9.0	0.7	10-16	6/15~5/8	W1/W2/W4
GHA20	9.0	0.7	12-20	1/2~25/32	W1/W2/W4
GHA25	9.0	0.7	16-25	5/8~1	W1/W2/W4
GHA27	9.0	0.7	16-27	5/8~1-1/16	W1/W2/W4
GHA32	9.0	0.7	20-32	25/32~1-1/4	W1/W2/W4
GHA40	9.0	0.7	25-40	1~1-1/2	W1/W2/W4
GHA50	9.0	0.7	32-50	1-1/4~2	W1/W2/W4
GHA60	9.0	0.7	40-60	1-9/16~2-3/8	W1/W2/W4
GHA70	9.0	0.7	50-70	2~2-3/4	W1/W2/W4
GHA80	9.0	0.7	60-80	2-3/8~3-1/8	W1/W2/W4
GHA90	9.0	0.7	70-90	2-3/4~3-9/16	W1/W2/W4
GHA100	9.0	0.7	80-100	3-1/8~3-15/16	W1/W2/W4
GHA110	9.0	0.7	90-110	3-9/16~4-5/16	W1/W2/W4
GHA120	9.0	0.7	100-120	3-15/16~4-3/4	W1/W2/W4
GHA130	9.0	0.7	110-130	4-5/16~5-1/18	W1/W2/W4
GHA140	9.0	0.7	120-140	4-3/4~5-1/2	W1/W2/W4
GHA150	9.0	0.7	130-150	5-1/8~5-15/16	W1/W2/W4
GHA160	9.0	0.7	140-160	5-1/2~6-5/16	W1/W2/W4
GHA170	9.0	0.7	150-170	5-15/16~6-11/16	W1/W2/W4
GHA180	9.0	0.7	160-180	6-5/16~7-1/8	W1/W2/W4
GHA190	9.0	0.7	170-190	6-11/16~7-1/2	W1/W2/W4
GHA200	9.0	0.7	180-200	7-1/8~8	W1/W2/W4

Please contact sales for customizing any other specific sizes.

7. Specifications



Code	Width (mm)	Thickness (mm)	Diameter Range		Material
			mm	inch	
GHB20	12.0	0.7	12-20	1/2~25/32	W1/W2/W4
GHB25	12.0	0.7	16-25	5/8~1	W1/W2/W4
GHB27	12.0	0.7	16-27	5/8~1-1/16	W1/W2/W4
GHB32	12.0	0.7	20-32	25/32~1-1/4	W1/W2/W4
GHB40	12.0	0.7	25-40	1~1-1/2	W1/W2/W4
GHB50	12.0	0.7	32-50	1-1/4~2	W1/W2/W4
GHB60	12.0	0.7	40-60	1-9/16~2-3/8	W1/W2/W4
GHB70	12.0	0.7	50-70	2~2-3/4	W1/W2/W4
GHB80	12.0	0.7	60-80	2-3/8~3-1/8	W1/W2/W4
GHB90	12.0	0.7	70-90	2-3/4~3-9/16	W1/W2/W4
GHB100	12.0	0.7	80-100	3-1/8~3-15/16	W1/W2/W4
GHB110	12.0	0.7	90-110	3-9/16~4-5/16	W1/W2/W4
GHB120	12.0	0.7	100-120	3-15/16~4-3/4	W1/W2/W4
GHB130	12.0	0.7	110-130	4-5/16~5-1/8	W1/W2/W4
GHB140	12.0	0.7	120-140	4-3/4~5-1/2	W1/W2/W4
GHB150	12.0	0.7	130-150	5-1/8~5-15/16	W1/W2/W4
GHB160	12.0	0.7	140-160	5-1/2~6-5/16	W1/W2/W4
GHB170	12.0	0.7	150-170	5-15/16~6-11/16	W1/W2/W4
GHB180	12.0	0.7	160-180	6-5/16~7-1/8	W1/W2/W4
GHB190	12.0	0.7	170-190	6-11/16~7-1/2	W1/W2/W4
GHB200	12.0	0.7	180-200	7-1/8~8	W1/W2/W4
GHB210	12.0	0.7	190-210	7-1/2~8-1/4	W1/W2/W4
GHB220	12.0	0.7	200-220	7-1/8~8-2/3	W1/W2/W4
GHB230	12.0	0.7	210-230	8-1/4~9-1/8	W1/W2/W4

Please contact sales for customizing any other specific sizes.

Disclaimer: This datasheet provides general information typical for German 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, including DIN 3017 compliance details, for the particular hose clamp being considered or used.