

1. Description



Quick Release Hose Clamps are a specialized type of worm gear hose clamp designed for applications requiring frequent, fast, and easy installation or removal of hoses without the need for complete disassembly of the clamp. They feature a standard worm drive mechanism (screw and housing) for final tightening, but incorporate an additional quick-release mechanism. This typically involves a pivoting or tilting screw housing, a hinged bridge, or a latch system that allows the band to be quickly opened and disengaged, or rapidly adjusted to a wide range of diameters. Once the approximate size is set and the quick-release mechanism is engaged, the clamp is then secured by tightening the worm screw in the conventional manner. These clamps are ideal for situations where hose sizes might vary, or where hoses need to be regularly connected and disconnected.

2. Key Features

- **Quick-Release Mechanism:** Allows the clamp to be opened fully or significantly loosened without extensive unscrewing, enabling rapid installation and removal. This can be a swing-away screw housing, a hinged latch, or a similar mechanism.
- **Worm Gear Tightening:** Utilizes a traditional worm screw for fine-tuning the tension and achieving a secure seal once the quick-release mechanism is engaged.
- **Wide Adjustment Range:** The quick-release feature often allows the clamp to accommodate a broader range of hose diameters compared to standard worm gear clamps of a similar band length.
- **Reusable:** Designed to be easily opened and closed multiple times without loss of clamping effectiveness, making them cost-effective for applications requiring frequent access.
- **Time-Saving:** Significantly reduces installation and removal time, especially on larger diameter hoses or in applications with repeated assembly/disassembly.
- **Ease of Use in Restricted Areas:** The ability to open the clamp wide can simplify installation in tight or awkward spaces where continuous turning of a screw would be difficult.
- **Secure Clamping:** Provides a strong and reliable seal when properly tightened using the worm gear.
- **Versatility:** Suitable for various hose types and applications where quick adjustment or removal is beneficial.

3. Technical Data

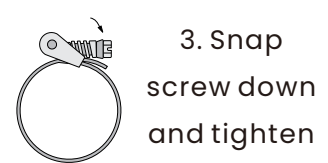
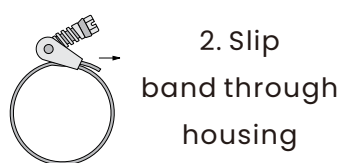
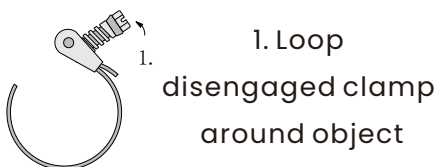
- **Type:** Worm Gear Hose Clamp with Quick-Release Mechanism (e.g., tilting housing, latch, swing bridge)
- **Common Materials:**
 - **Band & Housing:**
 - Stainless Steel (e.g., SS201, SS301, SS304/AISI 304, SS430) for varying degrees of corrosion resistance.
 - Carbon Steel (often zinc-plated for corrosion resistance).
 - **Screw:**
 - Carbon Steel (typically zinc-plated).
 - Stainless Steel (e.g., SS304, SS400 series).
- **Quick-Release Mechanism Components:** Materials often match the band/housing or are chosen for durability and ease of operation.
- **Material Designations (Common W-Grades may apply, similar to standard worm gear clamps):**
 - **W1:** All parts zinc-plated carbon steel.
 - **W2:** Band and housing stainless steel (e.g., 430SS); screw zinc-plated carbon steel.
 - **W4:** All parts stainless steel (typically 304 grade or equivalent).
- **Band Widths (Common):** 12.7mm (1/2"), 14.2mm (9/16")
- **Band Thickness (Typical):** 0.6mm, 0.7mm
- **Screw Head Type (Common):** 5/16" (8mm) Hexagonal Head, typically slotted for use with a flathead screwdriver.
- **Clamping Diameter Range:**
 - Available in a very wide range of sizes, often starting from around 2" (50mm) and going up to very large diameters (e.g., 10", 12", 16" or 25mm up to 400mm, 750mm, or even 1000mm for some specialized versions).
 - The quick-release feature makes them particularly useful for covering large diameter variations.
- **Recommended Installation Torque:**
 - Similar to standard worm gear clamps once the quick-release mechanism is latched. Varies by band width and material (e.g., 30 in-lbs / 3.4 Nm for 12.7mm band, potentially higher for 14.2mm bands).
- **Relevant Standards:**
 - May conform to aspects of general hose clamp standards (like DIN 3017 for the worm drive component) or specific industry standards for quick-release mechanisms. RoHS compliance may be noted.

4. Common Applications

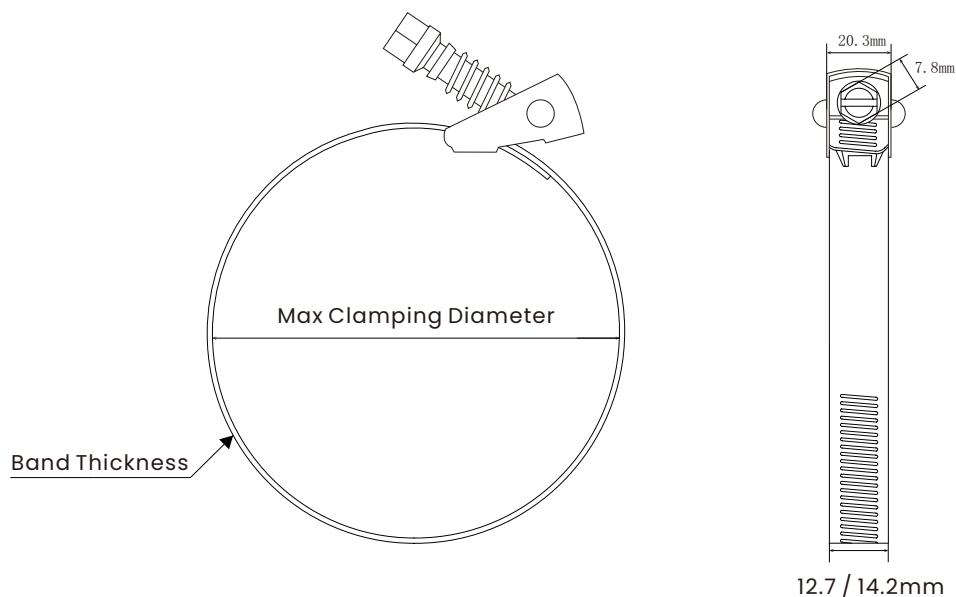
- **HVAC Systems:** Attaching flexible ducting, where quick installation and adjustment are beneficial.
- **Industrial Ducting & Ventilation:** Connecting large diameter hoses or ducts for air, dust, or fume extraction.
- **Telecommunications:** Securing cable enclosures or conduits where easy access might be needed.
- **Agricultural Equipment:** Irrigation systems, bulk material transfer hoses.
- **Marine Applications:** Various hose connections, especially where quick removal for maintenance is advantageous (stainless steel versions recommended).
- **Temporary Setups:** Ideal for applications where hoses are frequently moved or reconfigured.
- **Large Diameter Hose Connections:** Where fully unscrewing a standard clamp would be very time-consuming.
- **Applications with Unknown or Variable Hose Sizes:** The wide adjustment range is useful in field repairs or installations with some uncertainty in hose diameter.

5. Installation Guidance

- **Open the Clamp:** Fully disengage the quick-release mechanism (e.g., flip up the screw housing, unlatch the bridge). This allows the band to be opened wide.
- **Position Around Hose:** Wrap the opened band around the hose that is placed over the fitting.
- **Engage Quick-Release:** Bring the ends of the band together to the approximate required diameter and engage the quick-release mechanism (e.g., swing the housing down and latch it, or slide the band through and secure the latch). Ensure it is properly seated.
- **Tighten the Screw:** Use a screwdriver or hex driver to tighten the worm screw in the conventional manner until the desired clamping force and a secure seal are achieved. Do not overtighten.
- **To Remove:** Slightly loosen the worm screw to release tension on the quick-release mechanism. Disengage the quick-release mechanism to open the clamp quickly.



6. Specifications



Band Width:12.7mm Band Thickness: 0.6mm

Code	Max Bundle Diameter	
	mm	inch
QRA70	23-70	0.9-2.8
QRA90	42-90	1.7-3.5
QRA130	51-130	2.0-5.0
QRA152	51-152	2.0-6.0
QRA176	51-176	2.0-7.0
QRA215	60-215	2.4-8.5
QRA254	60-254	2.4-10.0
QRA305	60-305	2.4-12.0
QRA356	60-356	2.4-14.0
QRA381	60-381	2.4-15.0
QRA457	60-457	2.4-18.0
QRA508	60-508	2.4-20.0

Band Width:14.2mm Band Thickness: 0.6mm

Code	Max Bundle Diameter	
	mm	inch
QRB70	51-70	2.0-2.8
QRB90	51-90	2.0-3.5
QRB130	51-130	2.0-5.0
QRB152	51-152	2.0-6.0
QRB176	51-176	2.0-7.0
QRB215	60-215	2.4-8.5
QRB254	60-254	2.4-10.0
QRB305	60-305	2.4-12.0
QRB356	60-356	2.4-14.0
QRB381	60-381	2.4-15.0
QRB457	60-457	2.4-18.0
QRB508	60-508	2.4-20.0

Please contact sales for customizing any other specific sizes.

7. Maintenance & Safety

- **Inspect Mechanism:** Periodically check the quick-release mechanism (hinges, latches, pivots) for wear, damage, or corrosion that might impede its function.
- **Lubrication (if applicable):** Some pivoting mechanisms might benefit from occasional light lubrication, especially in harsh environments, as per manufacturer guidance.
- **Ensure Proper Latching:** Before final tightening with the screw, always ensure the quick-release mechanism is fully and securely engaged. An improperly latched clamp will not hold effectively.
- **Material Compatibility:** Choose clamp materials appropriate for the operating environment to prevent corrosion.
- **Application Limits:** Use within the manufacturer's recommended pressure and temperature ratings.
- **Safety Equipment:** Wear gloves when handling metal clamps and safety glasses if there's any risk of flying debris during installation or removal.

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