Bandtite®

TECHNICAL DATASHEET

1. Description

Double Wire Hose Clamps are a type of fastener designed to secure a hose over a fitting or spigot, preventing leakage. They consist of two parallel wire strands formed into a circular shape, which are then tightened by a screw and nut mechanism (or sometimes a spring action for self-adjusting types). The double wire design aims to distribute the clamping force more evenly around the circumference of the hose compared to a single band clamp, particularly on softer or more pliable hoses. These clamps are often chosen for their cost-effectiveness and ease of installation, especially in applications where very high clamping forces are not the primary requirement but a secure, reliable seal is still needed. They are commonly used in automotive, plumbing, agricultural, industrial, and household applications.

2. Key Features

- **Double Wire Construction:** Two parallel wires provide a clamping surface, which can be beneficial for even pressure distribution, especially on flexible or corrugated hoses.
- **Screw and Nut Tightening Mechanism:** Most common types use a screw (often with a hex head or slot) and a nut (sometimes captive) to draw the wires together and tighten the clamp.
- **Adjustable Diameter:** The screw mechanism allows for adjustment to fit a range of hose diameters.
- **Cost-Effective:** Generally a more economical option compared to some heavy-duty band clamps.
- **Ease of Installation:** Can be installed and tightened using common hand tools like a screwdriver or wrench.
- **Good for Flexible Hoses:** The design can be particularly effective on softer or spiral/corrugated hoses as the wires can settle into the grooves, providing a good grip.
- **Light to Medium Duty Applications:** Best suited for low to moderate pressure applications where extreme clamping force is not required.
- **Spring Action Variants:** Some double wire clamps are spring-type (self-tightening), designed to maintain constant tension and adapt to thermal expansion and contraction of the hose.
- **Aesthetic Appeal (in some applications):** Can be preferred where a less industrial look is desired.

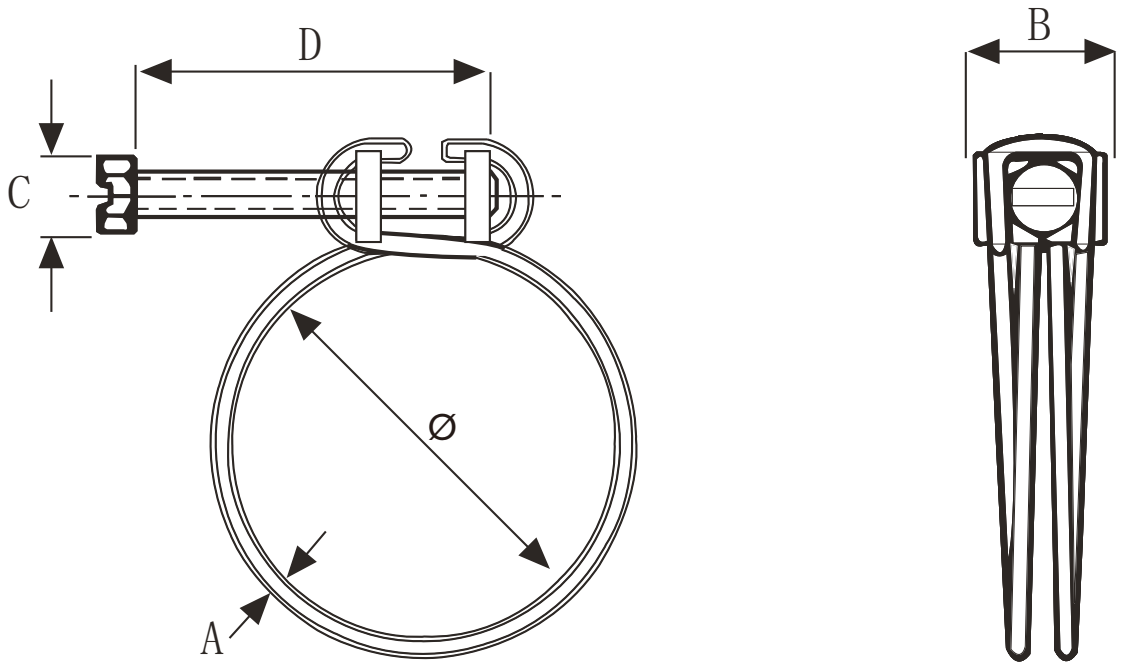
3. Technical Data

- **Type:** Double Wire Screw Clamp / Double Wire Spring Clamp
- **Common Materials:**
  - **Wire:**
    - Carbon Steel (often zinc-plated for corrosion resistance - e.g., yellow dichromate, clear/blue zinc).
    - Stainless Steel (e.g., SS201, SS304, SS316) for enhanced corrosion resistance.
    - Spring Steel (for spring-type clamps).
  - **Screw/Bolt & Nut:**
    - Carbon Steel (typically zinc-plated).
    - Stainless Steel.
- **Material Designations (Common W-Grades, though less formally applied than worm-drive clamps):**
  - **W1:** All parts are zinc-plated carbon steel.
  - **W4:** All parts are stainless steel (e.g., Ss304).
- **Wire Diameter (Typical):**1.5mm, 1.8mm, 2.0mm, 2.2mm, 2.5mm, 3.0mm (heavier duty versions)
- **Screw/Bolt Sizes (Common for screw-type):** M5, M6, M8.
- **Screw Head Type (Common):**
  - Hexagonal Head (often slotted for screwdriver).
  - Phillips head.
  - Flat head (for some tool-free designs).
- **Clamping Diameter Range:**
  - Available in a very broad range of sizes, from small diameters (e.g., 7-8mm or 11-14mm) up to larger sizes (e.g., 113-120mm or even larger).
  - Sizes are specified by their minimum and maximum clamping diameter (e.g., 13-16mm, 26-30mm, 50-55mm).
- **Recommended Installation Torque (for screw types):**
  - Generally lower than band clamps. Specific values depend on wire diameter, material, and screw size (e.g., 2.0 Nm might be a general reference for smaller carbon steel versions, but always refer to manufacturer specs).
- **Surface Treatment:**
  - Zinc Plating (e.g., clear/silver, yellow/gold dichromate) for carbon steel components to improve corrosion resistance.
  - Polished or natural finish for stainless steel.
- **Relevant Standards:**
  - While not as universally standardized as DIN 3017 for worm drive clamps, manufacturers may adhere to internal quality standards or specific industry requirements. RoHS compliance may be noted for materials.

4. Common Applications

- **Automotive:** Low-pressure fuel lines, vacuum hoses, power steering return hoses, ventilation hoses.
- **Plumbing:** Securing flexible pipes for drainage, washing machine hoses, garden hoses.
- **Agriculture:** Irrigation systems, sprayer hoses.
- **Industrial:** Light-duty air and fluid transfer lines, dust collection systems (especially with flexible, spiral wire hoses), ventilation ducting.
- **Household Appliances:** Washing machines, dishwashers.
- **Pond and Aquarium:** Securing corrugated hoses for pumps and filters.
- **Marine:** Low-pressure applications where moderate corrosion resistance is needed (stainless steel versions).

6. Specifications



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Code (W1)	Diameter (mm)	Wire Dia. (mm)	Screw (mm)
DWA1114	11-14	1.5	M5×30
DWA1316	13-16	1.5	M5×30
DWA1518	15-18	1.5	M5×30
DWA1720	17-20	1.8	M5×30
DWA1922	19-22	1.8	M5×30
DWA2024	20-24	1.8	M5×30
DWA2226	22-26	1.8	M5×30
DWA2428	24-28	1.8	M5×30
DWA2630	26-30	2.2	M6×40
DWA2832	28-32	2.2	M6×40
DWA3135	31-35	2.2	M6×40
DWA3438	34-38	2.2	M6×40
DWA3540	35-40	2.2	M6×40
DWA3742	37-42	2.2	M6×40
DWA4045	40-45	2.2	M6×40
DWA4348	43-48	2.2	M6×50
DWA4550	45-50	2.2	M6×50
DWA4752	47-52	2.2	M6×50
DWA5055	50-55	2.2	M6×50
DWA5358	53-58	2.2	M6×50
DWA5560	55-60	2.2	M6×60
DWA5462	54-62	2.2	M6×60
DWA6065	60-65	2.5	M6×60
DWA6368	63-68	2.5	M6×60
DWA6570	65-70	2.5	M6×70
DWA7075	70-75	2.5	M6×70
DWA7580	75-80	2.5	M6×70
DWA8085	80-85	2.5	M6×70
DWA8490	84-90	2.5	M8×70
DWA8995	89-95	2.5	M8×70
DWA94100	94-100	2.5	M8×80
DWA98105	98-105	2.5	M8×80
DWA103110	103-110	2.5	M8×80
DWA108115	108-115	2.5	M8×80
DWA113120	113-120	2.5	M8×80

Code (W4)	Diameter (mm)	Wire Dia. (mm)	Screw (mm)
DWB1114	11-14	2.0	M6×30
DWB1316	13-16	2.0	M6×30
DWB1518	15-18	2.0	M6×30
DWB1720	17-20	2.0	M6×30
DWB1922	19-22	2.0	M6×30
DWB2024	20-24	2.0	M6×30
DWB2226	22-26	2.0	M6×30
DWB2428	24-28	2.0	M6×35
DWB2630	26-30	2.0	M6×35
DWB2832	28-32	2.0	M6×40
DWB3135	31-35	2.0	M6×40
DWB3438	34-38	2.0	M6×40
DWB3540	35-40	2.0	M6×40
DWB3742	37-42	2.0	M6×40
DWB4045	40-45	2.0	M6×40
DWB4348	43-48	2.0	M6×40
DWB4550	45-50	2.3	M6×40
DWB4752	47-52	2.3	M6×50
DWB5055	50-55	2.3	M6×50
DWB5358	53-58	2.3	M6×50
DWB5560	55-60	2.3	M6×50
DWB5462	54-62	2.3	M6×50
DWB6065	60-65	2.3	M6×50
DWB6368	63-68	2.3	M6×50
DWB6570	65-70	2.3	M6×50
DWB7075	70-75	2.3	M6×50
DWB7580	75-80	2.3	M6×50
DWB8085	80-85	2.3	M6×50
DWB8490	84-90	2.3	M6×50
DWB8995	89-95	2.3	M6×50
DWB94100	94-100	2.3	M6×50
DWB98105	98-105	2.3	M6×60
DWB103110	103-110	2.3	M6×60
DWB108115	108-115	2.3	M6×60
DWB113120	113-120	2.3	M6×60

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Disclaimer: This datasheet provides general information typical for Double Wire 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.