TECHNICAL DATASHEET

1. Description

Two-Piece "O" Shape **Rubber Lined Pipe Clamps** are engineered fastening solutions designed for the secure suspension and support of pipes, hoses, or conduits, particularly in applications where vibration damping, noise reduction, and protection of the clamped surface are important. These clamps consist of two semi-circular or C-shaped metal halves that, when assembled with bolts, form a complete circular ("O" shape) enclosure around the pipe. A key characteristic is the resilient rubber lining on the inner surface of both clamp halves. This lining provides a cushioning effect, isolates the pipe from direct metal-to-metal contact, and can accommodate minor irregularities in the pipe's surface. Typically, these clamps feature integrated mounting points (e.g., a welded nut or boss) for attachment to threaded rods, enabling overhead suspension from ceilings, beams, or strut channel systems.

2. Key Features

- **Secure 360° Encirclement:** The two-piece design forms a complete ring, providing a strong and uniform grip around the pipe or hose.
- **Vibration Damping & Noise Reduction:** The integrated rubber lining effectively absorbs mechanical vibrations and dampens noise transmission between the pipe and the support structure, contributing to quieter system operation.
- **Pipe Protection:** The resilient rubber cushion prevents abrasion, scratching, and crushing of the pipe surface, especially important for softer pipe materials (e.g., copper, plastic) or coated pipes.
- **Galvanic Corrosion Prevention:** The rubber lining acts as an insulator between dissimilar metals (e.g., a copper pipe and a steel clamp), helping to prevent galvanic corrosion.
- **Heavy-Duty Support:** Designed to support the weight of pipes and their contents in suspended applications.
- **Enhanced Grip:** The rubber lining can improve the frictional grip on the pipe, reducing the likelihood of slippage.
- **Thermal Expansion Allowance (Minor):** The elasticity of the rubber can accommodate minor thermal expansion or contraction of the pipe.
- **Easy Installation:** The two-piece design simplifies installation around existing or new pipework.
- **Vertical Adjustment Capability:** When used with threaded rods, allows for precise vertical adjustment of the pipeline.
- **Corrosion Resistant Options:** Metal components are available in various materials and finishes for different environmental conditions.

3. Technical Data

- **Type:** Two-Piece Split Ring Pipe Clamp with Rubber Lining, Cushioned Pipe Hanger, Insulated Pipe Support.
- **Shape:** "O" Shape / Circular.
- **Common Materials:**
  - **Clamp Halves (Metal Body):**
    - Carbon Steel (Mild Steel)
    - Stainless Steel (e.g., Type 304/A2, Type 316/A4)
  - **Rubber Lining:**
    - EPDM (Ethylene Propylene Diene Monomer): Most common due to good resistance to weathering, ozone, UV, heat, and water.
    - SBR (Styrene-Butadiene Rubber)
    - Neoprene: Good oil resistance.
    - Silicone: For higher temperature applications.
  - **Hardware (Bolts, Nuts):** Carbon Steel (Zinc Plated), Stainless Steel.
- **Surface Finish/Coating (for Carbon Steel Clamp Halves):**
  - Electro-Galvanized (Zinc Plated - BZP)
  - Hot-Dip Galvanized (HDG)
  - Painted or Powder Coated.
- **Compatible Pipe Sizes (Nominal Bore / Outside Diameter):**
  - Available for a wide range of standard pipe sizes (e.g., IPS, DIN).
  - Commonly ranges from 1/2" (DN15) up to 8" (DN200) or larger. Sizing refers to the pipe OD the clamp is designed to accommodate with the rubber lining.
- **Fastening Mechanism:** Two clamp halves are secured together using two bolts and nuts, one on each side of the clamp.
- **Suspension Connection:**
  - Typically a welded nut or tapped boss on the top clamp half (or on a connecting bridge piece).
  - Common thread sizes for suspension: M8, M10, M12, or 3/8", 1/2". Some designs may feature dual-threaded bosses (e.g., M8/M10).
- **Rubber Lining Thickness (Typical):** 3mm to 8mm, varies by clamp size and manufacturer.
- **Rubber Hardness (Durometer):** Typically in the range of 50-75 Shore A.
- **Temperature Range (for Rubber Lining):**
  - **EPDM:** Approx. -40°C to +120°C (-40°F to +248°F).
  - **Silicone:** Can be significantly higher.
- **Load Rating:** Varies significantly based on clamp size, material, and design. Manufacturers provide specific safe working load (SWL) data.
- **Relevant Standards:** DIN 4109, DIN 4102 Class B2, MSS SP-58 & SP-69, ASTM standards for material properties.

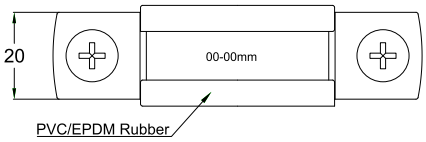
4. Common Applications

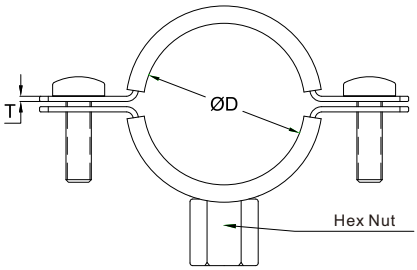
- **HVAC Systems:** Supporting refrigerant lines, chilled water pipes, heating pipes, and insulated ductwork where vibration and noise control are critical.
- **Plumbing:** Suspending domestic and commercial water supply lines (hot and cold), drainage pipes, and soil pipes, especially to reduce noise transmission.
- **Industrial Piping:** Supporting process piping where vibration isolation or pipe protection is needed.
- **Refrigeration Systems:** Securing and cushioning refrigerant lines.
- **Sanitary Installations:** Supporting pipes in clean environments.
- **Construction:** General pipework support in residential, commercial, and industrial buildings.
- Applications requiring isolation of the pipe from the support structure or protection of the pipe surface.

5. Installation Guidance

- **Select Correct Clamp Size:** Choose a clamp where the nominal bore (considering the rubber lining) matches the outside diameter of the pipe to be supported. Verify load capacity.
- **Prepare Suspension Point:** Ensure the overhead support (e.g., threaded rod attached to beam clamp or ceiling anchor) is securely installed and at the correct location.
- **Position Clamp Halves:** Place the two rubber-lined clamp halves around the pipe at the desired support location.
- **Assemble Clamp:** Insert the connecting bolts through the aligned holes in the clamp halves and loosely thread on the nuts.
- **Attach to Suspension Rod:** Lift the pipe with the loosely assembled clamp and connect the clamp's top mounting boss/nut to the threaded suspension rod. Adjust to the approximate height.
- **Align and Tighten:**
  - Ensure the pipe is at the correct elevation and alignment.
  - Evenly tighten the clamp's assembly bolts on both sides until the rubber lining is adequately compressed around the pipe, providing a firm grip. Do not over-tighten to the point of excessively deforming the rubber or damaging the clamp.
  - Securely tighten the nuts on the suspension rod to fix the clamp at the final elevation.
- **Spacing:** Install hangers at intervals recommended by relevant piping codes or engineering specifications.

6. Specifications





Code	Clamping Range (mm)	Band Width (mm)	Band Thickness (mm)
RP019	15-19	20/25	1.2/1.5/2.0
RP025	20-25	20/25	1.2/1.5/2.0
RP030	26-30	20/25	1.2/1.5/2.0
RP036	32-36	20/25	1.2/1.5/2.0
RP043	38-43	20/25	1.2/1.5/2.0
RP051	47-51	20/25	1.2/1.5/2.0
RP058	53-58	20/25	1.2/1.5/2.0
RP064	60-64	20/25	1.2/1.5/2.0
RP072	68-72	20/25	1.2/1.5/2.0
RP080	75-80	20/25	1.2/1.5/2.0
RP086	81-86	20/25	1.2/1.5/2.0
RP092	87-92	20/25	1.2/1.5/2.0
RP105	99-105	20/25	1.2/1.5/2.0
RP112	107-112	20/25	1.2/1.5/2.0
RP118	113-118	20/25	1.2/1.5/2.0
RP130	125-130	20/25	1.2/1.5/2.0
RP137	132-137	20/25	1.2/1.5/2.0
RP138	138-142	20/25	1.2/1.5/2.0
RP152	148-152	20/25	1.2/1.5/2.0
RP166	159-166	20/25	1.2/1.5/2.0
RP212	200-212	20/25	1.2/1.5/2.0
RP220	215-220	20/25	1.2/1.5/2.0
RP252	248-252	20/25	1.2/1.5/2.0

TYPE A

TYPE B

TYPE C

- TYPE A: M6 Screw + M8 Nut
- TYPE B: M6 Screw + M10 Nut
- TYPE C: M6 Screw + M8+M10 Nut

7. Maintenance & Safety

- **Regular Inspection:** Periodically inspect clamps for the condition of the rubber lining (check for hardening, cracking, perishing, or displacement), tightness of all bolts and nuts, and any signs of corrosion on metal components.
- **Load Limits:** Always operate within the manufacturer's specified safe working load limits.
- **Environmental Compatibility:** Ensure the rubber lining and metal components are suitable for the operating temperature, potential chemical exposure, and overall environmental conditions.
- **Proper Tightening:** Use appropriate tools and avoid over-tightening the clamp assembly bolts, which could damage the rubber lining or the clamp itself.
- **Safety During Installation:** When working overhead, use appropriate safety equipment (e.g., hard hats, safety glasses, gloves) and follow safe work practices. Ensure the supporting structure is adequate.

8. Associated Products

- Threaded Rods (All-Thread)
- Channel Nuts (Spring Nuts, for mounting to strut channel)
- Beam Clamps
- Ceiling Plates / Anchors
- Hex Nuts and Washers (for suspension and assembly)
- Strut Channels

Disclaimer: This datasheet provides general information typical for Two-Piece "O" Shape Rubber Lined Pipe Clamps used for hanging. Specific technical data, materials, load capacities, and installation procedures can vary significantly between different manufacturers and product designs. Always refer to the manufacturer's official documentation and specifications for the particular rubber-lined pipe clamp being considered or used.