

# Installation Manual for Grooved Fittings

## 1. Introduction

This document provides an overview of the installation and usage instructions for both rigid and flexible couplings. Proper use of these couplings ensures the safe and efficient operation of your piping systems.

## 2. Types of Couplings

### Rigid Couplings

- Designed for fixed connections without flexibility.
- Suitable for applications where pipes need to be securely integrated.
- Pipe rigidity supports the connection.

### Flexible Couplings

- Provide system flexibility, such as tolerance for angular and relative misalignment.
- Allow gaps between pipe ends to accommodate thermal expansion and contraction.
- Can withstand axial loads along the pipe axis.

## 3. Installation Instructions

Follow these steps carefully for proper installation:

### 1. Inspect the pipe groove

Ensure the groove meets the standard. Remove any rust, dirt, grease, or other contaminants from the gasket and pipe end.



### 2. Apply lubricant

Use a non-toxic, non-petroleum-based lubricant on the pipe end and gasket.



### 3. Place the gasket

Slide the gasket over the sealing area of the steel pipe.



### 4. Connect the second pipe

Attach another grooved steel pipe and carefully position the gasket to fully cover both pipe ends.



### 5. Install the coupling

Ensure the coupling securely holds the pipes together.



### 6. Tighten the nuts

Gradually tighten the nuts to the specified torque, alternating sides during tightening. Ensure the gaps at the bolt support surfaces are evenly distributed.



## 4. Important Warnings

- **Even tightening:** Prevent gasket pinching by tightening the nuts evenly and alternately.
- **Correct torque:** Use the proper torque for safe operation. Over-tightening may damage bolts or castings.

- Refer to the torque table below:

BOLT SIZE		PROPER TORQUE RANGE	
MM	IN	NM	LBS-FT
M10	3/8"	40-50	30-40
M12	1/2"	120-150	90-110
M16	5/8"	140-180	100-130
M20	3/4"	200-270	150-200
M22	7/8"	240-300	180-220
M24	1"	270-340	200-250
-	1"1/8"	-	225-275

## 5. Safety Instructions

- Read and understand all instructions before starting the installation.
- Ensure the piping system is depressurized and drained before beginning work.
- Wear personal protective equipment (PPE), such as a hard hat, safety goggles, and safety shoes.
- Failure to follow these instructions may result in serious injury, improper installation, or property damage.

## 6. Questions?

For inquiries or further information, please feel free to contact us.

# Installation Manual for Mechanical T

## 1. Introduction

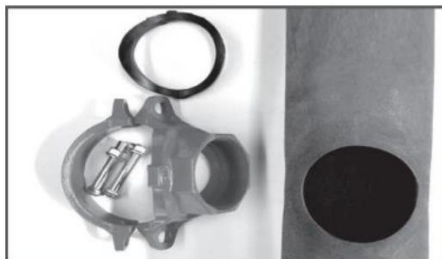
This manual provides step-by-step instructions for the correct installation of the mechanical T on piping systems. Properly following these instructions is essential to ensure safe and reliable operation.

## 2. Installation Steps

Follow these steps carefully for proper installation:

### Step 1: Preparing the Sawed Hole

- Use a correctly drilled hole located on the pipe's centerline (not on the weld line).
- Clean an area of 16 mm around the hole; remove burrs, rust, and debris.



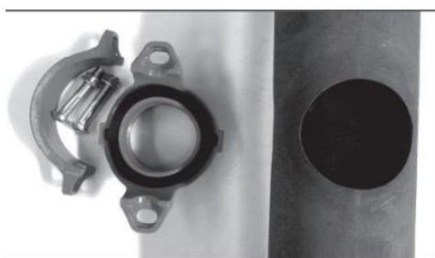
### Step 2: Checking the Gasket

- Inspect the gasket for any damage.
- Apply a thin layer of lubricant on the outside and sealing lip of the gasket.



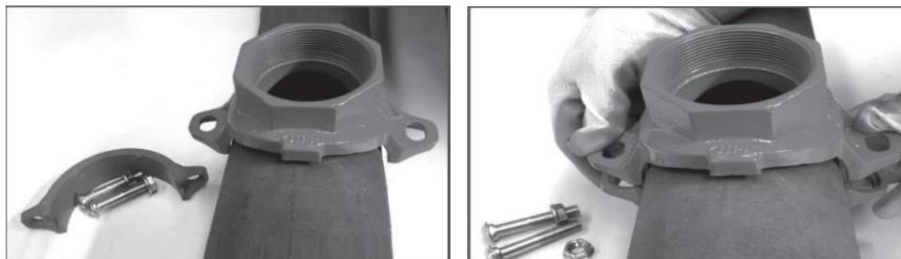
### Step 3: Placing the Gasket

- Position the gasket inside the mechanical T.
- Ensure that the gasket lip aligns with the cutouts in the housing.



#### Step 4: Installing the Mechanical T

- Place the mechanical T over the sawn hole.
- Ensure that the placement collar fits properly into the outlet hole.
- Check the connection by gently moving the housing.



#### Step 5: Tightening the Nuts

- Gradually and alternately tighten the nuts on both sides.



- **Correct torque:** Use the proper torque for safe operation. Over-tightening may damage bolts or castings.

BOLT SIZE		PROPER TORQUE RANGE	
MM	IN	NM	LBS-FT
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### 3. Important Warnings

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- Ensure the piping system is depressurized and drained before beginning work.
- Wear personal protective equipment (PPE), such as a hard hat, safety goggles, and safety shoes.
- Failure to follow these instructions may result in serious injury, improper installation, or property damage.

#### 5. Questions?

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