Title: Montage Zinkenträger Edited

Creator: Gordian Fabian

Mail: g.fabian@getclypp.com

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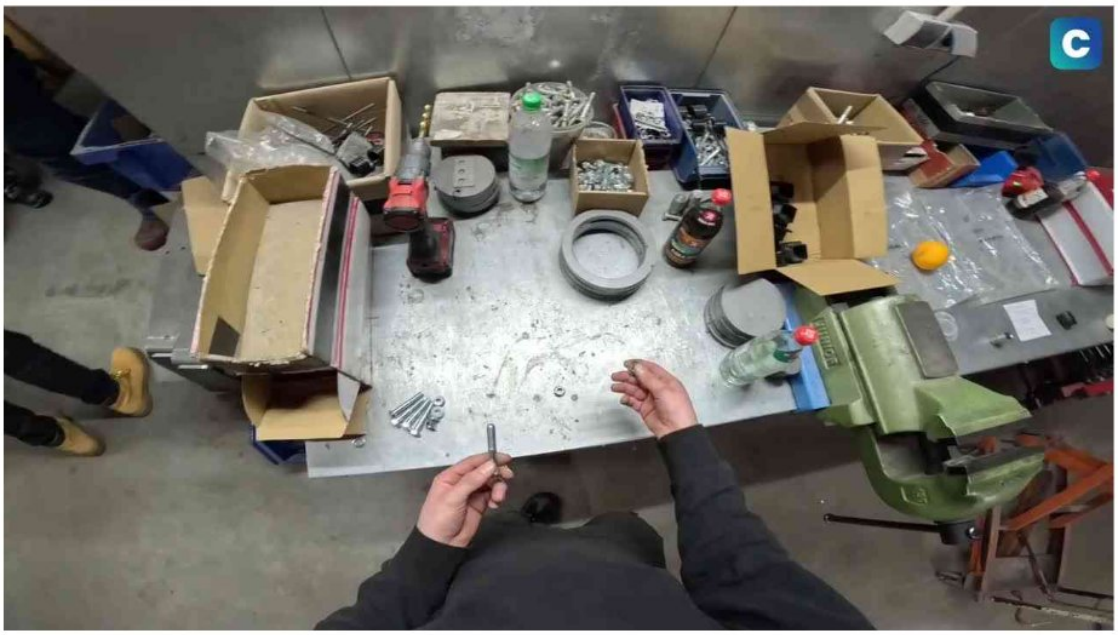


Company Name: Clypp Testumgebung

Last Edited On: 6/25/2026

Description:

SOP: Mounting Tines

1. Purpose

This Standard Operating Procedure outlines the steps required to correctly mount tines onto a pipe, ensuring proper orientation and secure fastening.

2. Tools and Materials Required

- **Hearing Protection**
- **Torque Wrench**
- **Impact Driver** with a 15-millimeter socket
- **17-millimeter Combination Wrench**
- **M10x60 Bolt**
- **Thick Washer**
- **M10 Flange Nut**
- **Tine(s)**
- **Pipe** (with square and round holes)
- **Stand** (for clamping the pipe)
- **Screws** (for securing the pipe in the holder)

3. Safety Precautions

- Always wear **hearing protection** when using power tools like an impact driver.

4. Procedure

4.1 Prepare the Pipe

- **Clamp the pipe** securely into the stand.
- Observe the pipe: it has a front side with square holes and a back side with round holes.
- **Position the pipe** so that the **square holes face forward**.

- **Secure the pipe** in the holder by inserting screws from both the left and right sides.
- **For a right-hand unloader:** Ensure the left side of the pipe has a short distance and the right side has a long distance from the holder.

4.2 Prepare the Tine Assembly

- Gather one **M10x60 bolt**, one **thick washer**, and one **M10 flange nut**.
- Take a **tine**.
- **Insert the thick washer** onto the bolt.
- Then, **insert the bolt** (with the washer) through the tine.

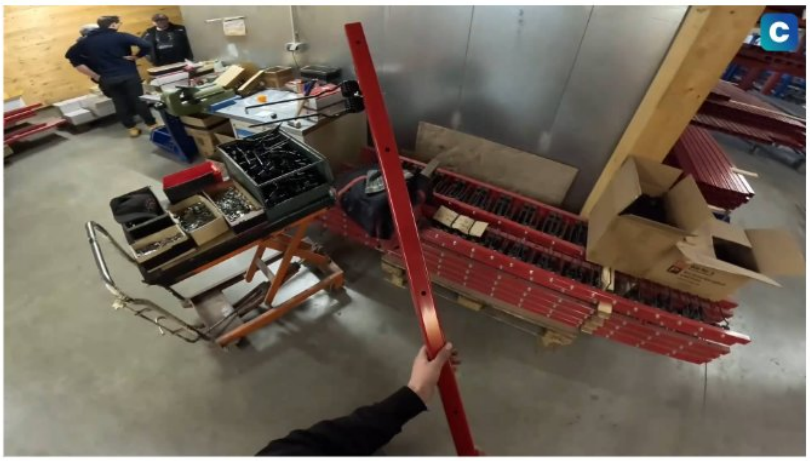
4.3 Mount and Secure the Tine

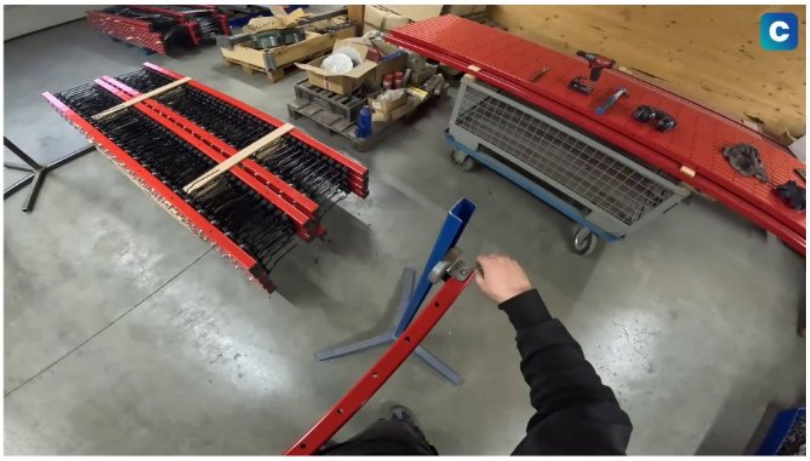
- **Mount the tine onto the pipe**, ensuring its curve faces backward.
- Using the **impact driver** (with the 15mm socket) and the **17-millimeter combination wrench**, begin to tighten the bolt.
- Continue tightening until the **tine is parallel to the pipe**.
- Finally, use the **torque wrench** to tighten the bolt to **45 Newton-meters**. Continue tightening until you hear a distinct click, indicating it is securely fastened to the specified torque.

5. Completion

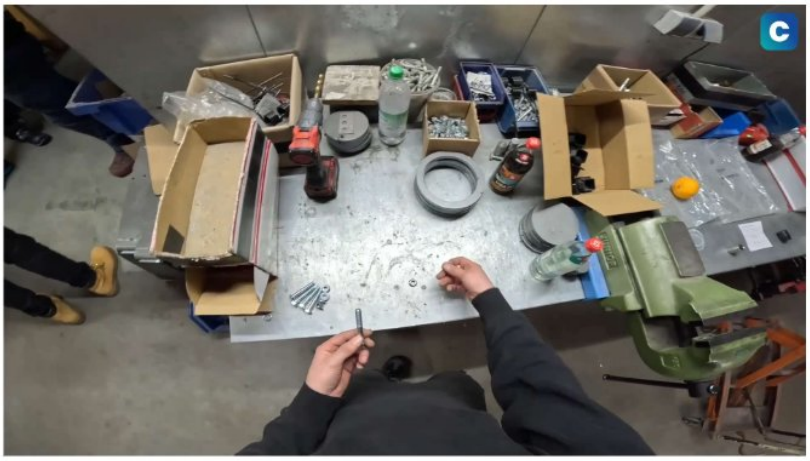
Once the final torque is applied, the tine is securely mounted. Repeat the procedure for any additional tines.

1	To begin, gather your tools: you'll need hearing protection, a torque wrench, an impact driver with a 15 mm socket, and a 17 mm combination wrench.
	

2	First, take the pipe and clamp it securely into the stand. Notice that the pipe has a front side with square holes and a back side with round holes.
	

3	Position the pipe so the square holes face forward, then secure it in the holder by inserting screws from both the left and right sides.
	

4	If you're a right-handed unloader, make sure the left side has a short distance and the right side has a long distance from the holder.
	

5	Next, prepare an M10 by 60 bolt, a thick washer, and an M10 flange nut.
	

6	Take a tine, insert the washer, and then thread the bolt through it.
	

7	Now, mount the tine onto the pipe, ensuring its curve faces backward.
	

8	Use the impact driver and the 17 mm wrench to tighten the bolt until the tine is parallel to the pipe.
	

9	Finally, use the torque wrench to tighten the bolt to 45 Newton meters until you hear a click, which indicates it's securely fastened.
	

Approved By:_____