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Your message dated: Your reference:

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Our reference:
Wm

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Datum:
Date:
15.12.2005

Non destructive testing – Flitzer - Ride

To whom it may concern!

We would like to inform that there is a new German TÜV regulation on older amusement rides which requires a special examination on safety relevant parts. To ensure the safety of the ride we highly recommend to perform this as requested.

Attached please find a „Wear inspection / Non destructive testing“ chart for the Flitzer ride. Sales

This testing requirement is restricted to dynamic high stress structural components whose breakdown could endanger the passengers. It is meant to be an addition to the required regular safety checks and maintenance check list and it is by no means a complete inspection program.

The testing results are to be documented in detail and comprehensible. These testing results are to be presented to the local safety authorities, responsible for the safety of Amusement Rides, along with evaluations and statements.

If doubts about their clear identification exists, the examined structural components are to mark distinctively (e.g. punch marks, etc.) in order to avoid confusion by further prospective testings.

Attached „Wear inspection / Non destructive testing“ chart is based on the assumption, that the ride is not modified and still original.

Remark:

The replacement of components can sometimes be more cost-efficient than expensive test procedures.

For questions or assistance on site regarding the examination and/or assembling/disassembling work, as well for spare parts, please don't hesitate to contact us. 49
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Wear inspection / Non destructive testing / -- Addition to the maintenance checklist and daily lubrication schedule:

Facility: Flitzer Ride

Please check the applicable items:

Components	Drw.-No.	Pos.	Time code	Test method code	Remark
Car:					
Car frame / Body	027-10-01	01	M	C2	Check welding seams, check for cracks and deformation
Car frame / Body	027-10-01	01	Y6	B1 or B2 or B3	Check welding seams, check for cracks and deformation
Hook at front axle	027-10-02	01	Y1	B1 or B2 or B3	Check welding seams, check for cracks
Front axle, stub	027-10-02	02	Y1	B1 or B2 or B3	Check welding seams, check for cracks, check for deformation
Front axle, frame	027-10-02	03	Y6	B1 or B2 or B3	Check for cracks
Elastic bearings	027-10-02	03	M	C1 or C2	Check for play and wear
Bolt – front axle	027-10-02	05	Y6		Check for play and wear
Rear axle, stub	027-10-03	01	Y1	B1 or B2 or B3	Check welding seams, check for cracks, check for deformation
Rear axle, frame	027-10-03	02	Y6	B1 or B2 or B3	Check welding seams, check for cracks,
Ball bearing slewing rim / rear axle	027-10-03	03	Y10	A1 or A2 or A3	Check for play
Wheel housing	027-10-04	01	M	C1 or C2	Check for cracks
Wheel housing	027-10-04	01	Y1	B1 or B1 or B3	Check for cracks
Bearing bush	027-10-04	02	M	C1 or C2	Check for wear and deformation

P:\027\Doku\Sonderprüfung\0406_Wearout inspection chart_RC_Version a.doc
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Legend of Time code:

D = daily
W = weekly
W2 = every two weeks
M = monthly
M6 = every six month
Y = yearly
Y5 = every five years
Y6 = first time after 6 years, then after 3 years, then yearly
Y10 = first time after ten years and then every four years

Legend of Test method code:

A1 = examination by manufacturer
A2 = examination by specialized company
A3 = accredited laboratory
B1 = magnaflux testing (MT)
B2 = paint penetration testing (PT)
B3 = ultrasonic testing (UT)
B4 = X-ray testing (RT)
C1 = visual inspection by an expert
C2 = visual inspection by an experienced, qualified maintenance staff
D = replacement

Remark: Above chart is a general valid chart for the Flitzer Ride. There might be some slight differences to your model.

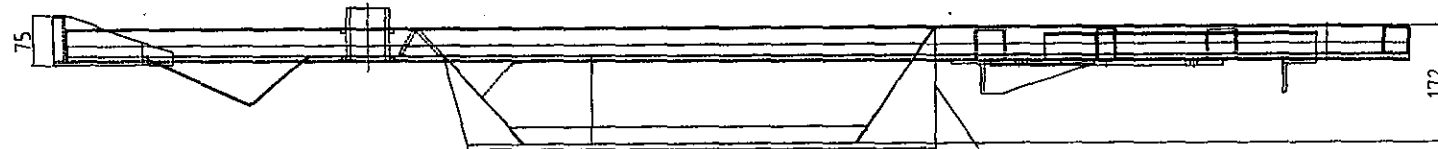
Detected broken, worn or cracked parts have to be replaced and/or repaired immediately by a qualified worker or company

The test results are to be documented in detail and comprehensibly. These test results along with evaluations and statements are to be presented to the local safety authorities, responsible for the safety of Amusement Rides.

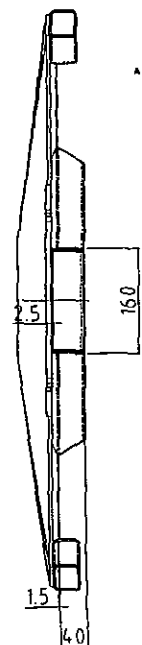
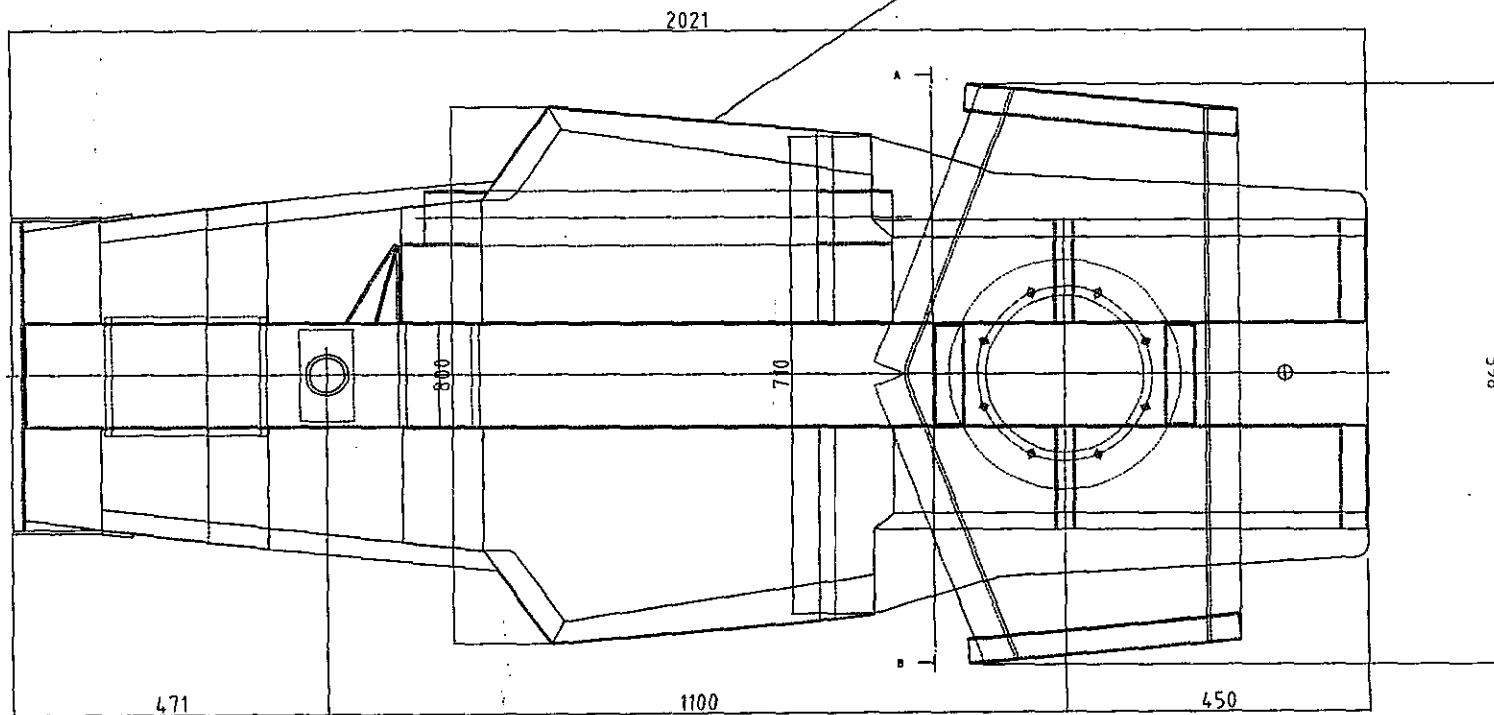
In order to avoid doubts as to their proper identification, the examined structural components should be marked distinctively (e.g. punch marks, etc.). Additionally to our "Wear inspection and NDT" requirements, the requirements of your local safety institutions have to be followed

The replacement of components can sometimes be more cost-efficient than expensive test procedures.
The check interval dates of replaced components change, based on the date they were exchanged.

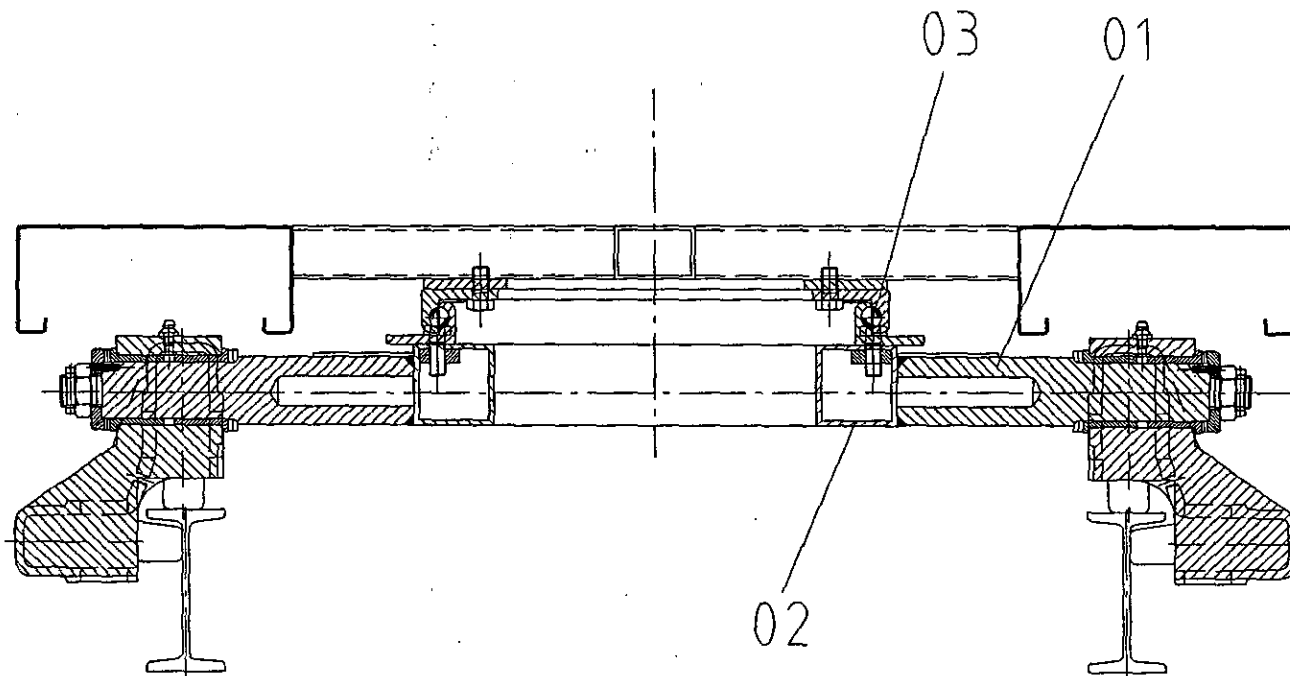
Same type components or component assemblies are subject to random check, with at least 20% but no less than two components being examined. A defect in any of these components requires a thorough check of all similar components.



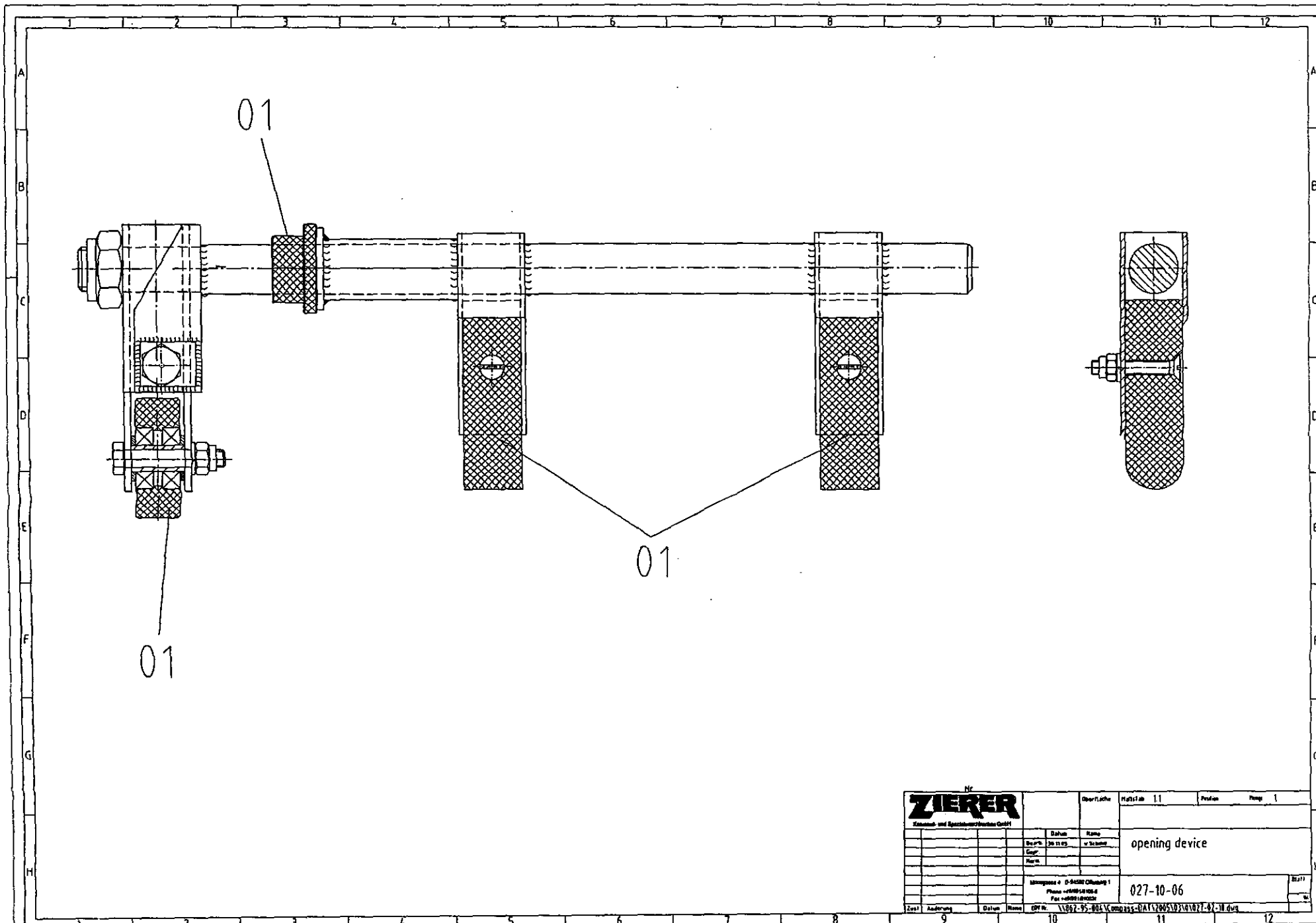
Pos.01

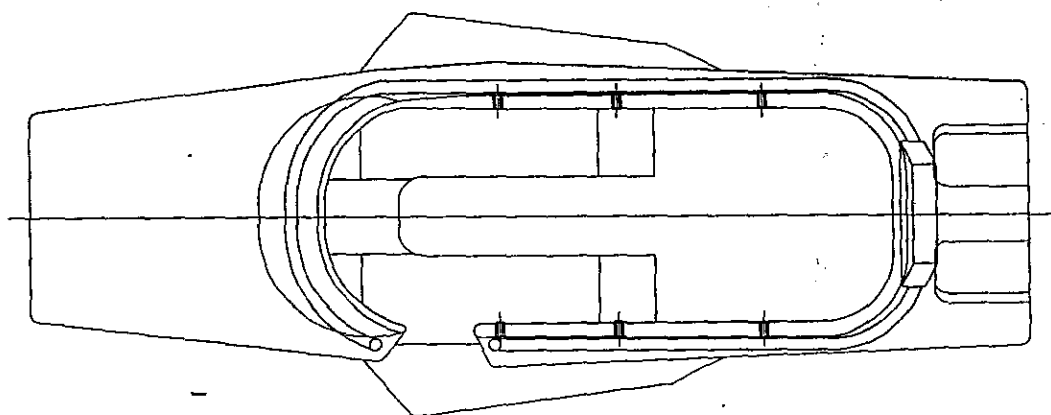
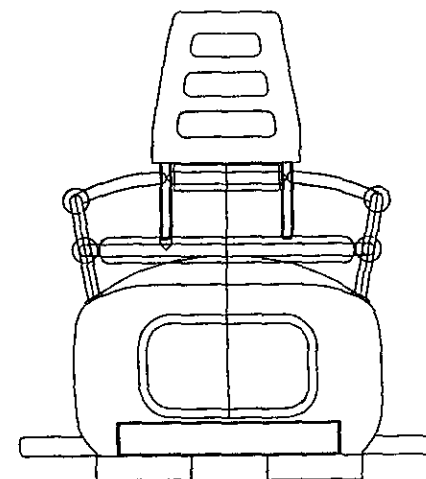
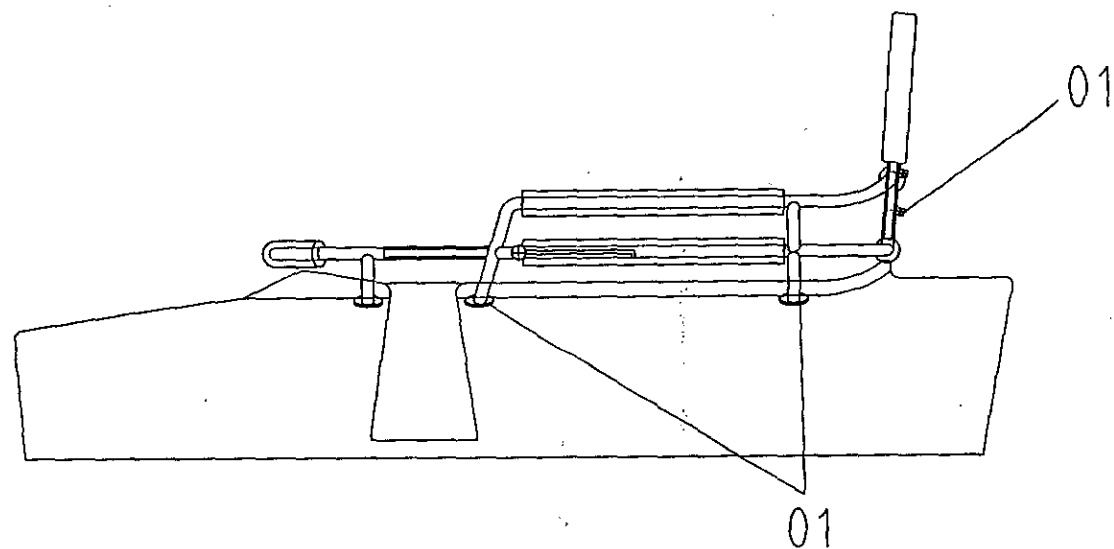


ZIEHER		Part Name	Frame
Part No.	027-N-01	Rev.	1
Drawn		Check	
By		Date	

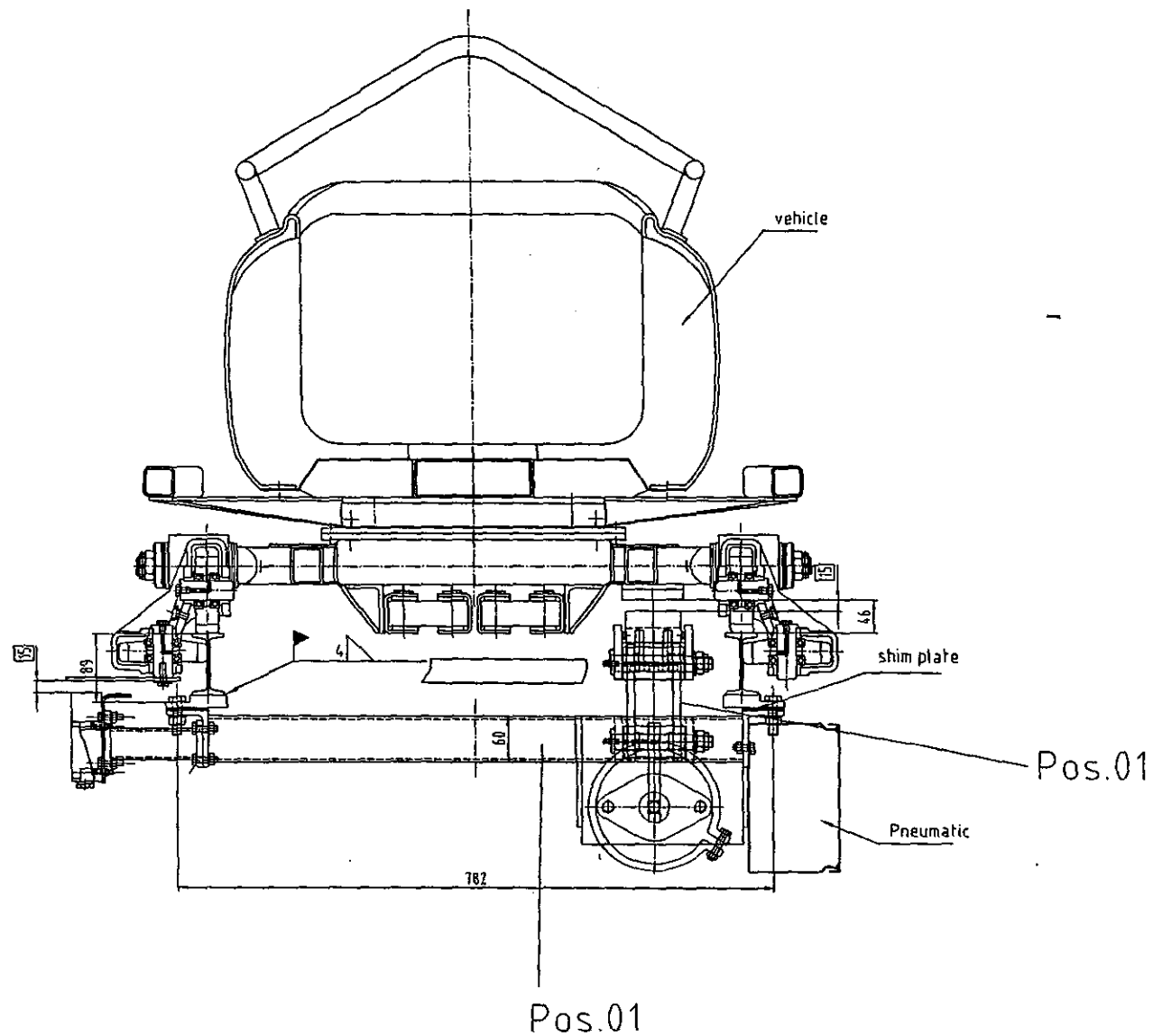


ZIERER		Masse ohne Toleranz- angabe z. DIN 7162-m		Runde	
Karosseri- und Fahrzeugbau GmbH		Mastab		Format	
Hauptstr. 4 41240 Gommern, Germany		Mastab		A4	
Phone 0557/7100-0 Fax 0557/7100-1 Fax 0557/7100-2		1998 Datum Name		Bezeichnung	
		Berk. 13.04. Wieser		rear axle	
		Cp.		Zeichnungs-Nr.	
		Name		027-10-03	
		Dr. Zeichnung ist eine Kopie des Originals. Die Zeichnung ist nicht für die Fertigung zu verwenden. Die Zeichnung ist nur für die Fertigung zu verwenden. Die Zeichnung ist nur für die Fertigung zu verwenden.		CAD	
Zust. Änderungen		Zust. Name			

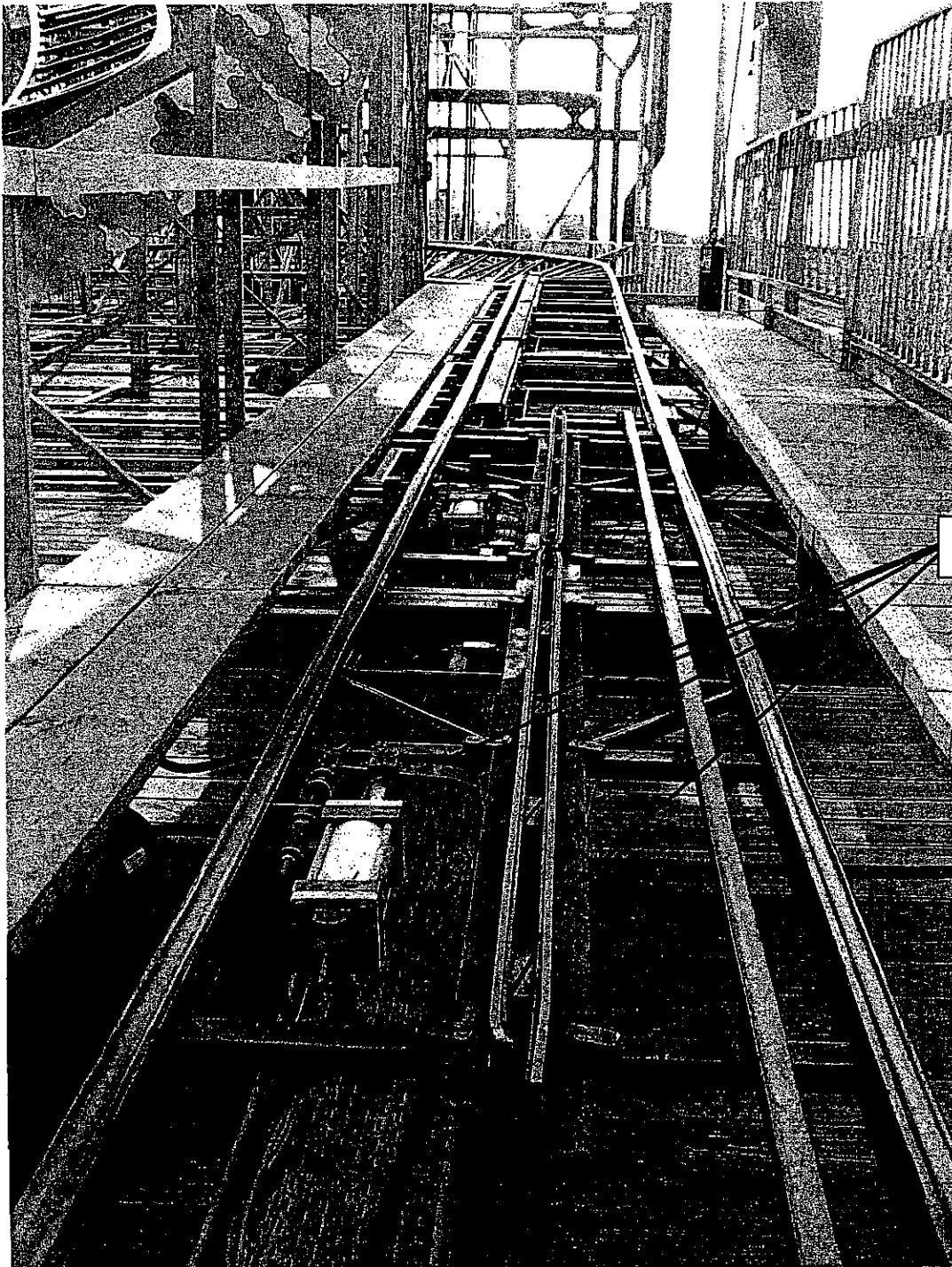




ZIERER Kunstmaler und Restaurator, Gießen		Start-Konto		Auflage 15	Prophet	Temp
		Baum	Stück	gallery		
		Baum	Stück			
		Baum	Stück			
		Baum	Stück			
Management & 20 Jahre Erfahrung Kunst, Restaurierung & Foto-Studio-Service				A37-10-07		
Zeit	Abbildung	Baum	Stück	100 St.	100 St.	100 St.

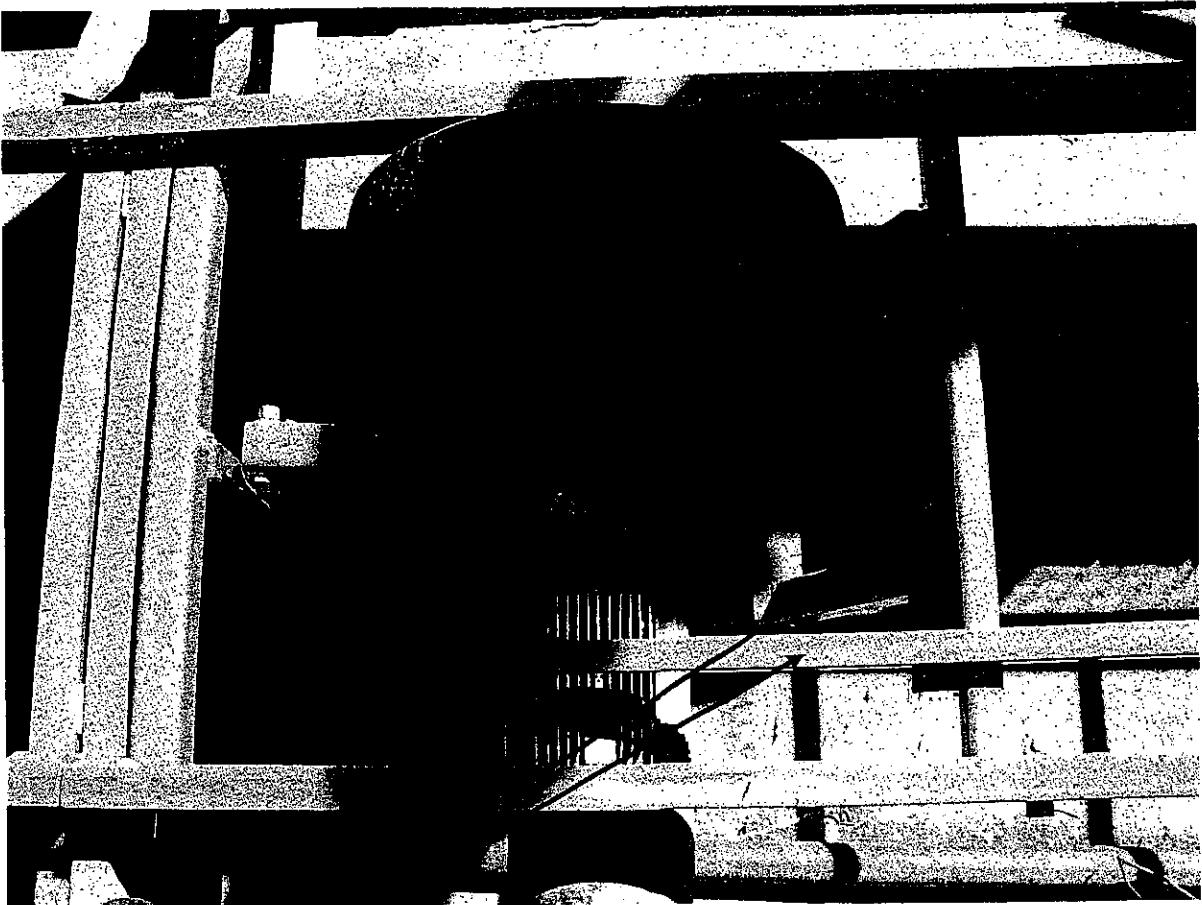


ZIEGLER		Part No.	Rev.
		027-M-00	1
magnetic brake			
027-M-00			
027-M-00			



Pos. 01

Photo # 1
Safety/Bloc Brake



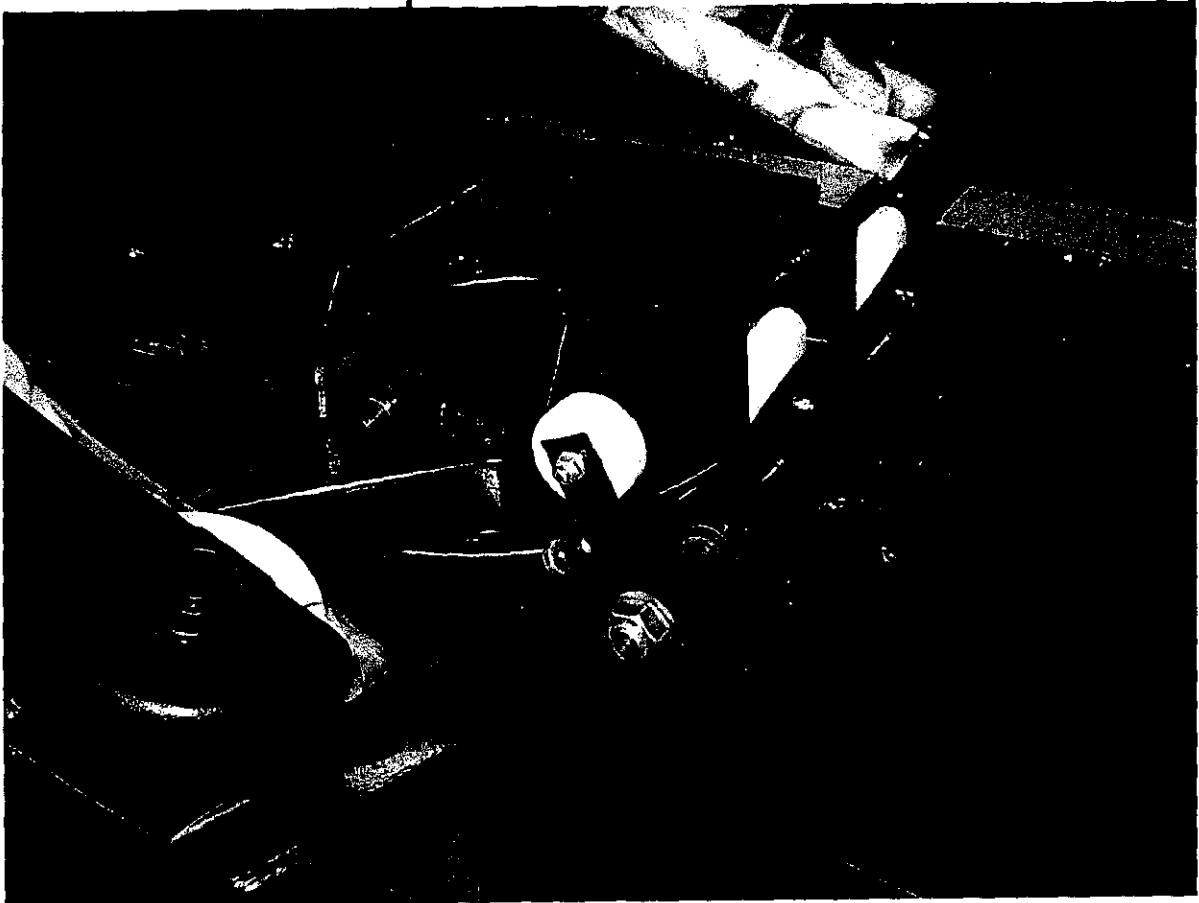
Pos. 01

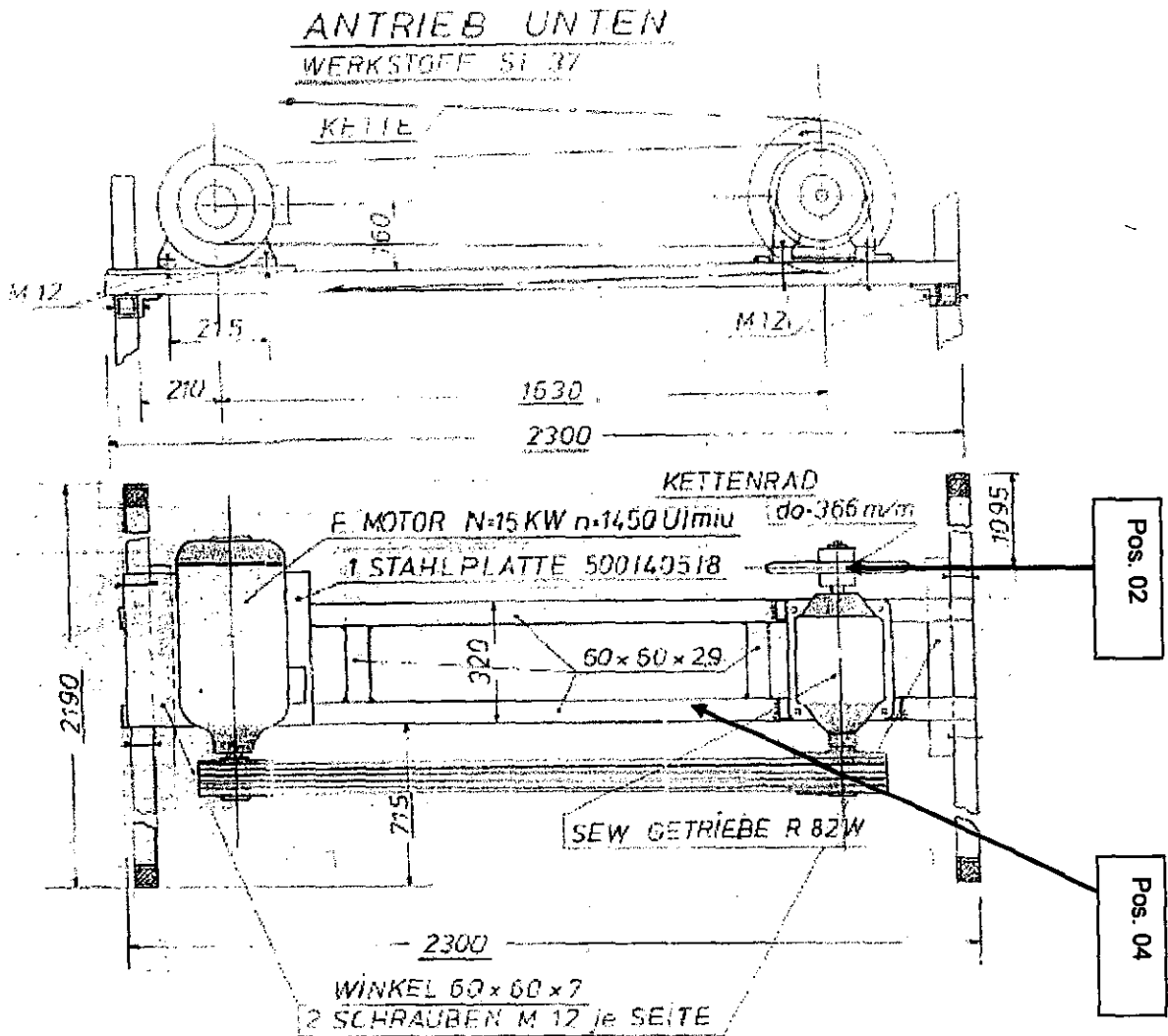
Photo # 2
Frame, Drive Unit



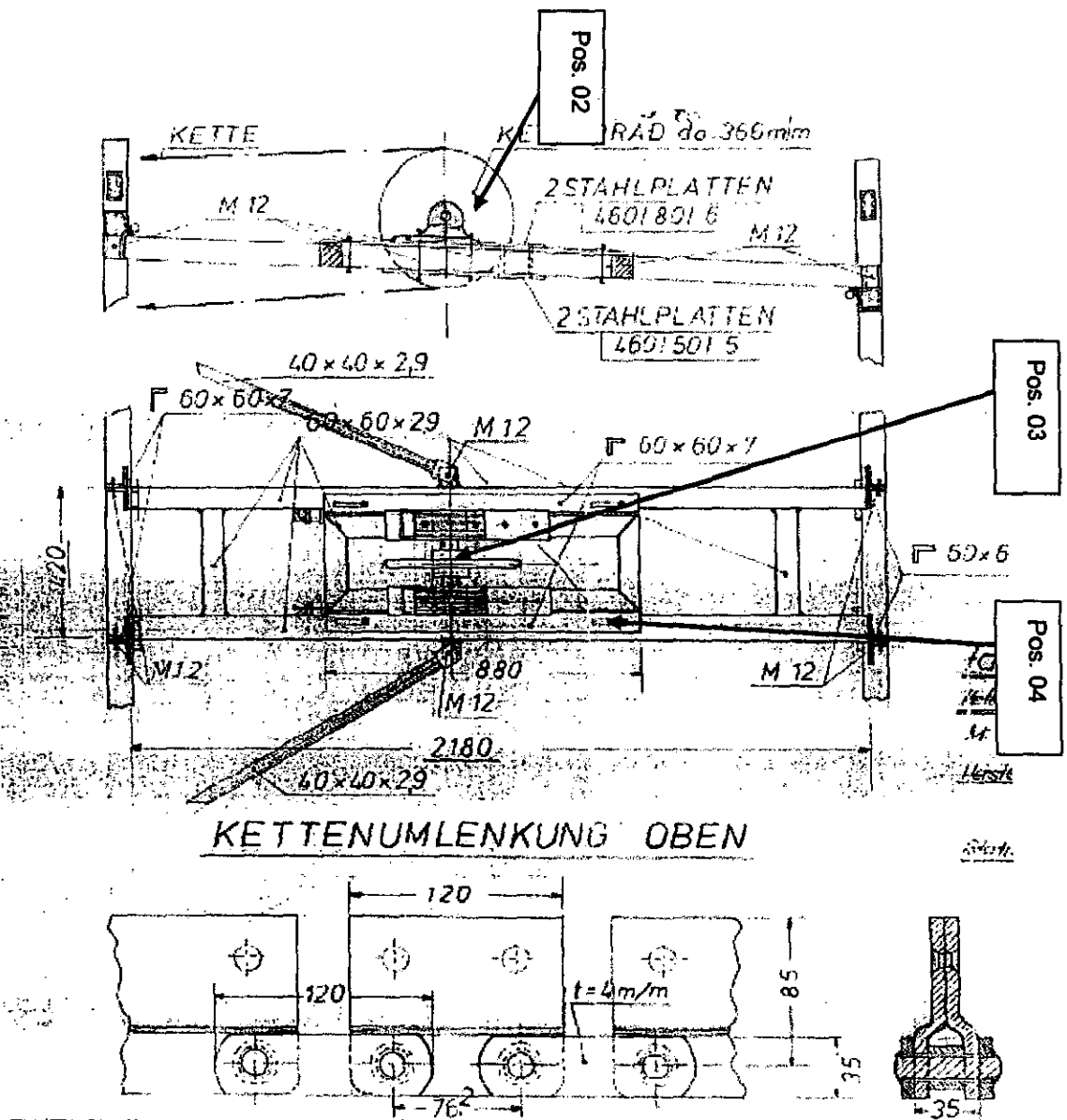
Photo # 3
Column / Frame

Pos. 01

**Photo # 4**
Anti Roll Back



Dwg. # 1
Lift System



Dwg. # 2
Lift System