



Operating Instructions

Platform Lift



Type	Master Gear 1,0
------	-----------------

Serial-N°:	
------------	--

Date	
------	--

EC Declaration of Conformity

according to EC directive 2006/42/EC on machinery

Name and address of the manufacturer

BlitzRotary GmbH
Hüfing Str.55
78199 Bräunlingen, Germany

Hier Typenschild einkleben	
Typ	
Baujahr	
Seriennummer	

This declaration relates exclusively to the machinery in the state in which it was placed on the market, and excludes components which are added and/or operations carried out subsequently by the final user. The declaration is no more valid, if the product is modified without agreement.

Herewith we declare, that the machinery described below

Product denomination Pit Jack

Model- / Type
Master Gear 0,5; Master Gear 1,0; Master Gear 1,2; Master Gear 2,0

Machinery-/Serial number:
Year of manufacture:

is complying with all essential requirements of the Machinery Directive 2006/42/EC. In addition the partly completed machinery is in conformity with the EC Directives 2004/108/EC relating to electromagnetic compatibility (Protection objectives have been met in accordance with Annex I No. 1.5.1 of the Machinery Directive 2006/42/EC).

Harmonised Standards used

- DIN EN 1570-1:2012-05 Lift tables - Safety requirements
- EN ISO 12100:2010 Safety of Machinery- Basic concepts
- EN 60204-1:2006+A1:2009 Electrical equipment of machines
- EN 349:1993+A1:2008 Safety of machinery - Minimum gaps

Other technical standards and specifications used

- BGR 500 management of working appliances
- BGV A3 law accident prevention regulation of electric facilities and equipment

The person authorised to compile the relevant technical documentation

BlitzRotary GmbH, Hüfing Str. 55, 78199 Bräunlingen

Place: Bräunlingen
Date : 19.03.2013



Frank Scherer
Managing Director



Operating Instructions

Contents

Contents

1	Safety	3		
1.1	Safety Hints in these Instruction.....	3		
1.2	Dangers of this machine	3		
1.3	Regulatory Application	3		
1.4	Danger through accessories.....	3		
1.5	Emissions.....	3		
1.6	Source of Danger	4		
1.7	Qualified Operators	4		
1.8	Personal Safety Equipment.....	4		
1.9	Safety Measures in the Work Place.....	4		
1.10	Conduct In An Emergency	4		
1.11	Picture Symbols.....	5		
2	Safety Facilities	5		
2.1	Aperture restriction in cylinder inlet.....	5		
2.2	Lowering Brake Valve (when on hand)	5		
2.3	One Way Flow Restriction Valve (when on hand)	5		
2.4	Folding Screen (when on hand)	5		
2.5	Securing Device On Wheels (transportable machines only).....	5		
2.6	Contact Frame (when on hand)	5		
3	Taking into use	6		
3.1	Setting up / Assembly.....	6		
4	Operation.....	7		
4.1	Lifting.....	7		
4.2	Lowering.....	7		
4.3	Shifting/Tilting	7		
5	Taking out of use	8		
6	Inspection.....	8		
6.1	Inspection before the first use	8		
6.2	Regular testing.....	8		
6.3	Check List	9		
7	Inspection / Maintenance.....	10		
7.1	Maintenance Plan.....	10		
7.2	Cleaning	10		
7.3	Mechanical	10		
7.4	Maintenance of the hydraulics	10		
7.5	Oil Change Intervals.....	11		
7.6	Checking the oil level.....	11		
7.7	Oil Change	11		
7.8	Bleeding the hydraulics.....	11		
7.9	Control of the hydraulic hoses.....	11		
8	Fault Finding.....	12		
8.1	Machine lowers on its own.....	12		
8.2	Machine will not raise to maximum height.....	12		
8.3	Machine does not raise with the first pump stroke.....	12		
8.4	Pump produces no pressure.....	12		
8.5	Breakdown / Maintenance of the valves	12		
9	General.....	13		
9.1	Transport Damage.....	13		
9.2	Warranty.....	13		
9.3	Ordering of spare parts	13		
10	Appendix.....	13		
	Dimension Sheet			
	Spare parts lists			
	Hydraulic Diagram			

Operating Instructions

Safety

1 Safety

1.1 Safety Hints in these Instructions

**Danger**

Draws attention to the fact that disregard for these instructions could lead to serious or even deadly consequences.

**Caution**

Draws attention to the fact that disregard of these instructions could under certain circumstances lead to injuries.



Indicates that disregard of these instructions could lead to the damage of the machine or goods on the machine.

1.2 Dangers of this machine

This machine is equipped with safety devices and is put through safety and quality control tests but there is a threat of danger by incorrect operation and misuse for the operator or other people in the vicinity for the machine and goods.

The danger zone is contained within the outer limits of the machine. All personnel concerned with the

- Installation
- Setting Up
- Operation
- Maintenance
- Repair

of the machine must have read and fully understood the operating instructions.

1.3 Regulatory Application

Applications

- Lifting of weights until maximum load.
- Working on the raised platform
- Hand Forklifts - Transporting of loads in the **lowered** position.

Prohibited

- Lifting and transportation of personnel
- Setting up and operation of machines in the open. Exception - machines specially constructed for this purpose
- Alterations and rebuilds of the machine.

Positioning of the load

- Load should not overhang the platform
- Unintentional shifting of the load should be prevented

1.4 Danger through accessories

When the following

- Rollers
- Conveyer Belts
- other transport facilities

are used the safety devices on the machine must not be made in operational through their use.

The danger zone is enlarged through the use of accessories

1.5 Emissions

See dimension sheet in appendix.

Operating Instructions

Safety

1.6 Source of Danger

Mechanic	Where?	Scissors arms / underframe
	What?	Crush and shear points
	Danger!	Loss of limbs / life
Hydraulic	Where?	Hydraulic components e.g. hoses
	What?	Because of damage oil could be sprayed out under high pressure
	Danger!	Burns and contamination to the eyes
Foot Pump	Where?	Operating pedals, Lifting / Lowering
	What?	Slipping off pedal
	Danger!	Injury to the leg
Current	Where?	Current carrying components
	What?	Touch
	Danger!	Life threatening



Work on the electrical and hydraulic components should only be carried out by a competent tradesman!



Danger
Never

- remove
- alter
- take out of service the safety facilities

Always secure that the machine is out of service when

- Setting up
- The alteration of the employment requirements
- The alteration of the operating procedure
- Maintenance
- Servicing
- Repair

1.7 Qualified Operators

The operator must

- be over 18 years old
- be instructed in the operation of the machine
- have proved to the firm that he is capable of operating the machine
- have read and understood the operating instructions
- must observe the operating instructions

1.8 Personal Safety Equipment

For the operating of the machine:

- Safety shoes

For cleaning / maintenance / repair:

- Safety shoes
- Work gloves
- Face protection

1.9 Safety Measures in the Work Place

- Secure positioning of the machine
- Avoid crush and shear zones between the machine and its surroundings
- Ensure that the workplace remains clean and clear of obstacles

1.10 Conduct In An Emergency

Footpump	E - Hydraulic
Release the pump / lower pedal immediately	Release the raise / lower push-button immediately
	Switch off at the mains / remove the plug
Secure against further	
By raised load support the load carrying component	

Operating Instructions

Safety Facilities

1.11 Picture Symbols

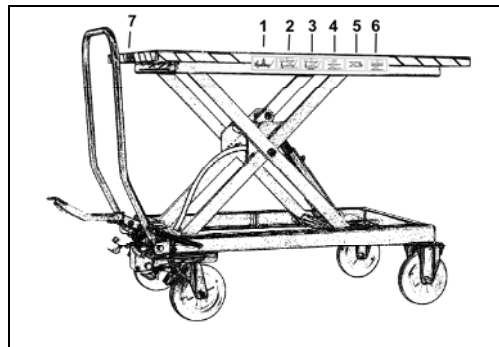


Fig. 1: Safety and Operational hints on the Lifting Truck

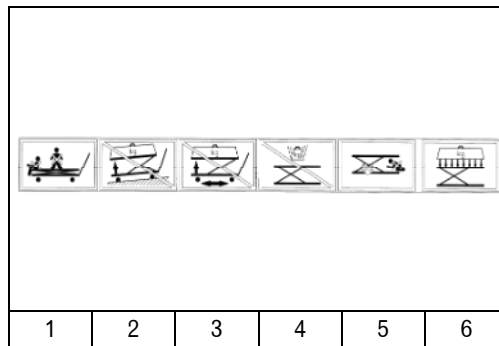


Fig. 2:

1. **Prohibited:** Carriage / Transport and Lifting of personnel!
2. **Prohibited:** Lifting and Lowering of loads on sloping surfaces!
3. **Prohibited:** Transport with raised load!
4. Accumulation of weight **forbidden!**
5. **Prohibited:** Staying / Grasping under an unsecured table!
6. Load must be evenly distributed (**surface load**)!

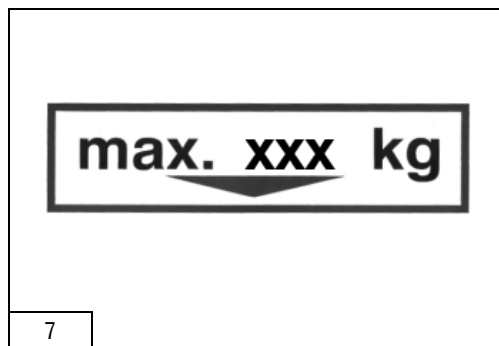


Fig. 3: You will find the maximum permissible load at the appendix of this instruction.

2 Safety Facilities

2.1 Aperture restriction in cylinder inlet

Restricts the oil flow by the rupture of a hydraulic hose

2.2 Lowering Brake Valve (when on hand)

Fixed adjusted limitation of the oil flow (lowering speed)

2.3 One Way Flow Restriction Valve (when on hand)

Adjustable restriction of the oil flow (lowering speed)

Attention : adjustment is dependent on load !

2.4 Folding Screen (when on hand)

Prevents grasping under the raised table.

2.5 Securing Device On Wheels (transportable machines only)

The securing device (brake) prevents the unintentional movement of the machine.

2.6 Contact Frame (when on hand)

The contact frame stops the lowering of the table when it comes in contact with an obstacle. Raise the table with the "raise" button and remove the obstacle then complete the lowering process

Operating Instructions

Taking into use

3 Taking into use

For technical details see dimension sheet in appendix

3.1 Setting up / Assembly



Caution
Wear protective gloves when assembling the spring.

- Put the wheel brake on.
- Assemble the handle and spring using the drawing as a guide. Please use the enclosed cable binder in accordance with Fig. 5.
- Both ends of the shaft swivel points are to be provided with the enclosed cover caps.

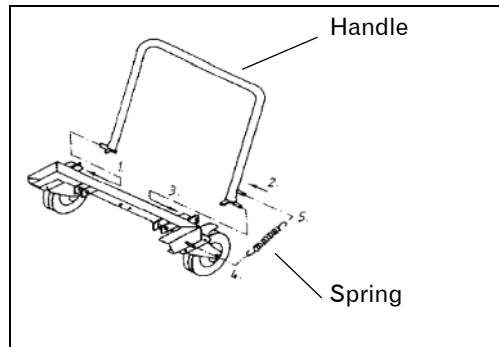


Fig. 4:



Fig. 5:

- Assemble the components in the enclosed packet using the drawing as a guide
- Exchange the tank plug for the orange breather plug

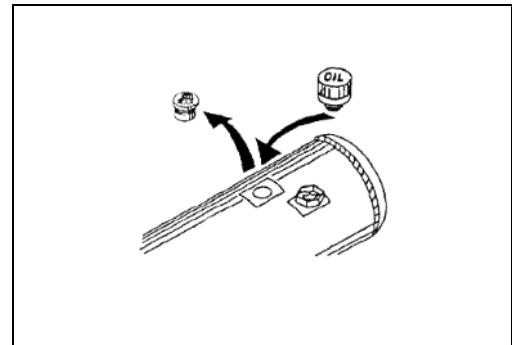


Fig. 6:

The component packet contains:

- Pos. 1 - Foot pedal
- Pos. 2 - Hex' bolt
- Pos. 3 - Hex' nut
- Pos. 4 - Bush
- Pos. 5 - Spring dia \varnothing 15x87
- Pos. 6 - Breather plug R 3/8"

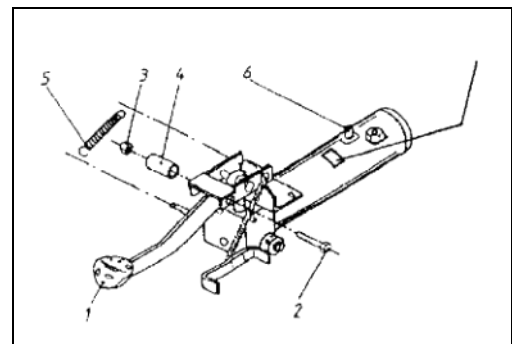


Fig. 7:

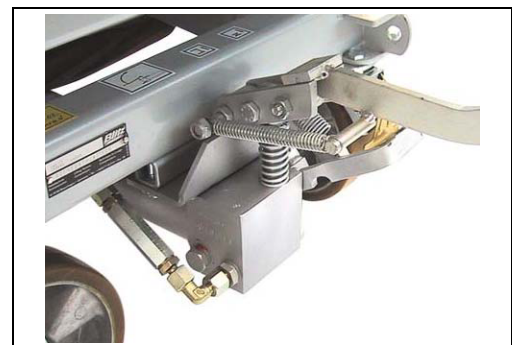


Fig. 8:



Have you read the operating instructions and above all the safety points and above all understood them? Then you can take the machine into use

Operating Instructions

Operation

4 Operation

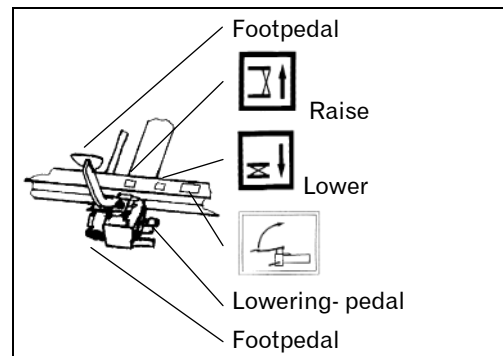


Fig. 9:



Danger

- Fold foot pedal away when not in use
- Wear safety shoes with none slip sole
- No personnel should be within the danger zone when raising or lowering the table
- Observe the picture symbols on the lifting machine

4.1 Lifting

- Stand in front of the machine
- Hold the handle firmly
- Apply the wheel brakes
- Fold down the foot pedal
- Pump the pedal repeatedly downwards until the required height is achieved
- You should not travel with the machine when it is loaded

4.2 Lowering

- Stand in front of the machine
- Hold the handle firmly
- The wheel brakes are already applied
- Hold the lowering pedal carefully down



Don't hold the lowering pedal fully down when the table is loaded otherwise the load will lower too quickly.

4.3 Shifting/Tilting

- Place yourself in front of the equipment
- The locking devices of the wheels are still on
- To shift or tilt the platform place a spanner upon the top of the relevant spindle or at the side of the frame
- Now turn the spindle according to the symbols affixed to move the platform into the position desired



Make sure to note the load every time you shift the platform to prevent unwanted and dangerous changes in position in time.

Operating Instructions

Taking out of use

5 Taking out of use

Machine with	for: <ul style="list-style-type: none"> • maintenance • cleaning • inspection • repair • battery charging 	for: end of work
--------------	--	------------------

footpump	<ul style="list-style-type: none"> • remove load • set table onto it's lowest position • remove table-board 	lower machine
	fold up the foot pedal	
12 V	<ul style="list-style-type: none"> • remove load • set table onto it's lowest position • remove table-board 	lower machine
	battery main switch into "off" position	
230 V 400 V	<ul style="list-style-type: none"> • remove load • set table onto it's lowest position • remove table-board 	lower machine
	remove mains plug and or mains switch "off"	

6 Inspection

6.1 Inspection before the first use



The machine is tested by the manufacturer before delivery

Machines that are delivered not ready for use should be inspected by a qualified person in the following aspects ;

- correct construction
- correctness for use

6.2 Regular testing



Regular testing of machines at intervals of at the longest one year should be carried out by a qualified person.

- use the check list on the following page
- make a photo copy of the list
- note top right on the check list
 - Lfd N° (check list number)
 - machine type
 - serial number
- cross each point when it is in order
- put the machine back into use only when each point has been crossed

when completed put the check list into the appendix of these operating instructions



Operating Instructions Inspection

6.3 Check List

Machine Type	
Lfd.-N°	Serial-N.°

Mechanical

- Cylinder pins secure
- All lever pins secure
- Wheel brakes in order (when on hand)
- Machine clean
- Stickers intact and readable
- Welded construction undamaged
- Machine holds the load in the maximum raised position for at least 10 minutes
- All bolted connections tight

Hydraulic

- No leaks in the hydraulic system
- Oil level correct
- No damage to the hoses (see 7.5)
- Lowering speed correctly adjusted
- Flow control valve secured (when on hand)
- All functions inspected without query

Inspection date	Inspector (signature)
-----------------	-----------------------

Operating Instructions

Inspection / Maintenance

7 Inspection / Maintenance

7.1 Maintenance Plan

What?	When?	Description
Cleaning	When necessary	7.2
Check Bushes	Every 250 hours	7.3
Check oil level top up	Yearly	7.4
Hydraulic oil change	-	7.4
Inspect oil hoses	Yearly	7.9

7.2 Cleaning



Danger
Secure that the machine is out of use

Clean

- your machine regularly
- especially the stickers (picture symbols) on the machine. (when the stickers are no longer readable please order new ones, order number see spare parts lists)
- working areas of the rollers

7.3 Mechanical

The machine is delivered with maintenance free bushes. Therefore the bushes only have to be checked regularly (250 working hours) for wear.

7.4 Maintenance of the hydraulics



Danger
Hydraulic oil can cause irritation and skin rashes. Avoid prolonged skin contact and wash the skin thoroughly after contact.

Wear protective clothing! (see chapter 1.8)



Protect the environment:
The handling and disposal of mineral oils is covered by laws. Dispose of old oil at an authorised disposal unit. Information can be found from the responsible authority. Be careful not to spill any hydraulic oil. Make precautions to catch any spilt oil (oil resistant covers, drip tray etc.)

This machine is filled with bio-oil on synthetic base

This oil is not mixable with water.

The biological removable hydraulic-oil is mixable with mineral-oil, but then it will loosen his biological removability.

The following or equivalent can be used:
ELF XPD 98064 (in this machine)

Operating Instructions

Inspection / Maintenance

7.5 Oil Change Intervals

The oil must be changed after the first 50 working hours, thereafter at intervals of 500 hours or at the latest every 2 years

7.6 Checking the oil level

- Sink the machine into its lowest position
- Read the oil level in the oil observation bung
- The level should be in the upper third of the bung
- Top-up when necessary

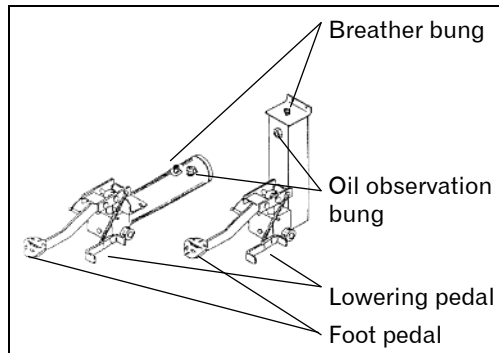


Fig. 10:

7.7 Oil Change

- Sink the machine into its lowest position.
- Place drip tray under pump.
- Remove the hydraulic hose from the pump and place in the drip tray.
- Pump the foot pedal until no more oil is discharged from the pump.
- Reconnect hose.
- Remove breather bung.
- Fill oil until level is in the upper third of the observation bung.
- Tank volumes:
 - tank 250 mm long = 1,0 l
 - tank 300 mm long = 1,3 l
 - tank 450 mm long = 1,9 l
 - vertical Tank = 1,2 l
- replace the breather bung.

7.8 Bleeding the hydraulics

- Sink the machine into its lowest position.
- Place drip tray under pump.
- Loosen the bleed screws on the cylinders
- When there are no bleed screws the cylinders are so constructed as to bleed themselves

- Pump until oil is discharged from the bleed screws without any air bubbles
- Tighten bleed screws
- Check oil level and top-up if necessary
- Bleed pump if necessary

see chapter 8.3

7.9 Control of the hydraulic hoses



A yearly check on the hydraulic hoses for a safe working condition is stipulated. The check must be carried out by a qualified tradesman.

Control the following:

- Can the following damage be observed on the outer mantle of the hose rips, kinks, cuts, unbending, abrasions or splitting?
- Are there any deformities in the hose when under or not under pressure?
- Are there any leaks between the hoses and the fittings? Is the hose coming out of the fitting?
- When there is any damage the hose should be changed.
- Depending on the requirements the hoses should be changed at the latest after six years.

Operating Instructions

Fault Finding

8 Fault Finding



Danger

Work on the hydraulic components should only be carried out by a qualified tradesman

Observe the safety instructions

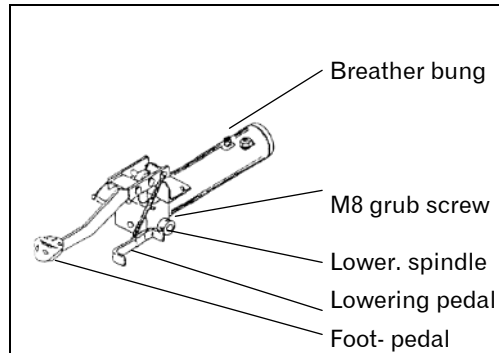


Fig. 11:

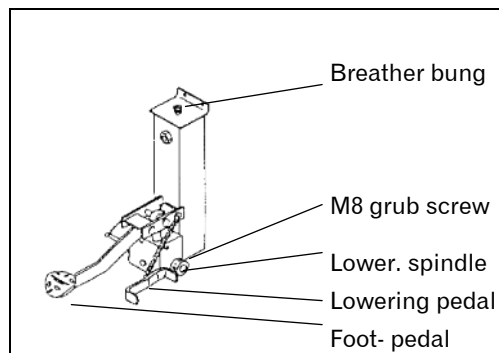


Fig. 12:

8.1 Machine lowers on its own

Adjust the lowering valve by following this procedure

- Loosen the M8 grub screw
- Leave the lowering pedal in its normal position
- Using a screwdriver slightly adjust the valve spindle:
 - Anticlockwise, to raise the lowering speed.
 - Clockwise, to reduce the lowering speed and to ensure that the pump holds the load in position.
- Lightly tighten the grub screw after every adjustment.
- When adjustment is correct fully tighten the grub screw.

8.2 Machine will not raise to maximum height

- Check oil level (see 7.4)

8.3 Machine does not raise with the first pump stroke

- Depress the lowering pedal with the right hand and at the same time quickly pump the foot pedal with the left hand.

8.4 Pump produces no pressure

- Remove the breather bung.
- Lay a clean cloth (twice folded) over the opening.
- Using a compressed air pistol pressurise the tank and at the same time quickly pump the foot pedal.

8.5 Breakdown / Maintenance of the valves

The valves used normally require no maintenance. By malfunction of the pump observe positions 1-4 in the "fault finding".

Should it be found that the positions 1-4 in "fault finding" produce no cure return the pump for repair.



Operating Instructions

General

9 General

9.1 Transport Damage

All deliveries are to be insured by the customer. We must turn down any possible claims concerning transport responsibility. Our responsibility is restricted to the hand-over of the machine in brand-new condition to the shipping agent. Should you discover any damage to the machine, do not use it and contact the shipping agent concerning the damage.

9.2 Warranty

Every machine is covered by a 12 months warranty against material faults and incorrect assembly. The warranty covers all parts that are returned post free within twelve months for inspection. The parts will then be inspected by us to determine whether the parts were damaged under normal use.

The warranty will be declared void if the parts are found to have been overloaded, handled incorrectly or that replacement parts have been assembled incorrectly.

9.3 Ordering of spare parts

Please give the following details when ordering;

Type:
Load:
Year of construction:
Serial Number:
Part description:
Order Number:

The address for ordering is to be found on the cover of this operating instructions.

10 Appendix

Dimension Sheet

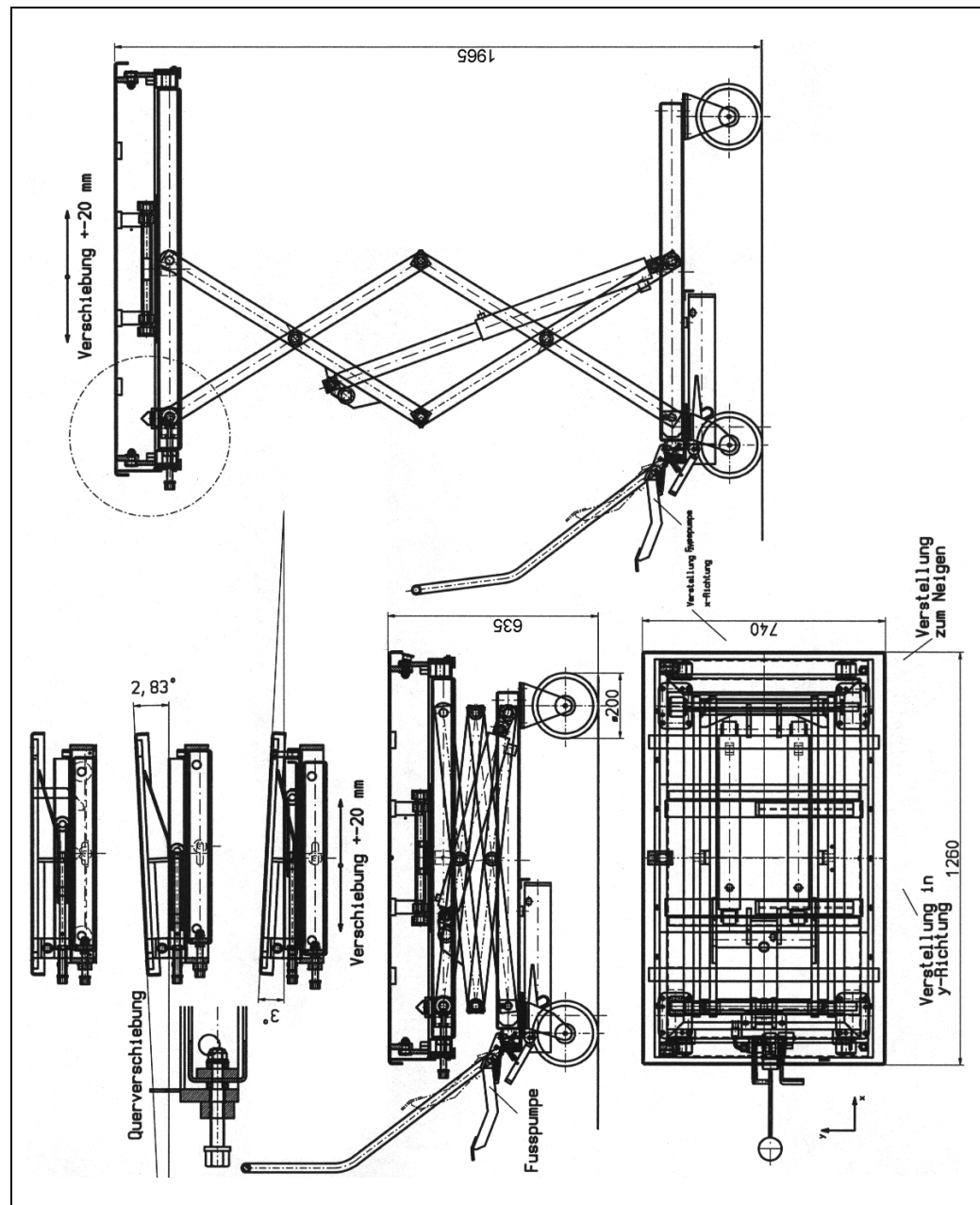
Mechanics

Useful load	1000 kg
Type of load	Surface load
Overall height	635 mm
Useful lift	1330 mm
Table top dimensions	5 x 1260 x 740 mm Smooth sheet metal
Lift per pedal stroke	approx. 12 mm
Lengthwise displacement	± 20 mm
Lengthwise displacement	± 20 mm
Inclination	± 2°
Wheels	dia. 200 mm
Weight	approx. 290 kg

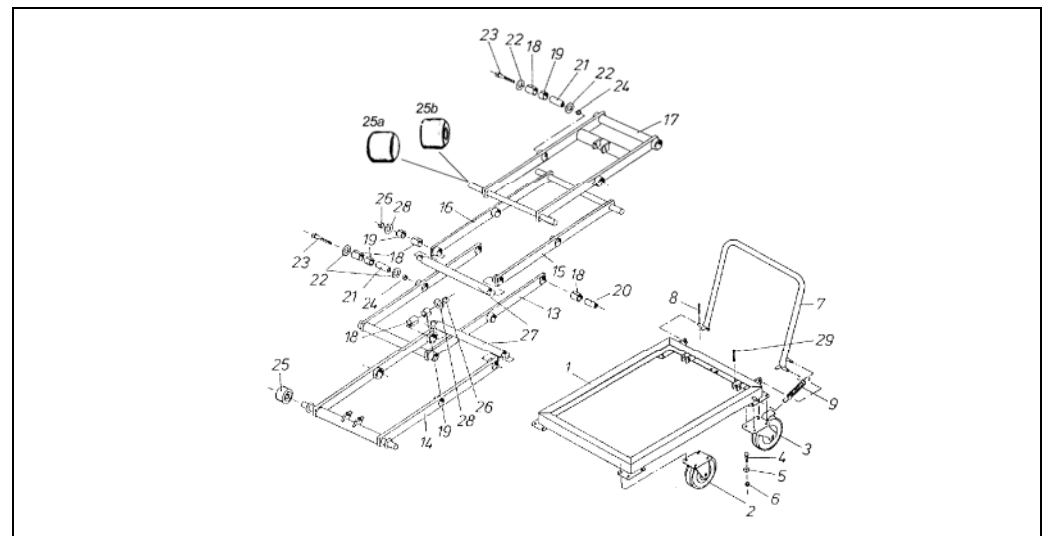
Hydraulics

Operating pressure	max. 220 bar
Oil filling volume	1.4 l
Type of oil	Bio oil
Hydraulic cylinder	2x dia. 40 x 450 mm stroke

Dimensional Drawing

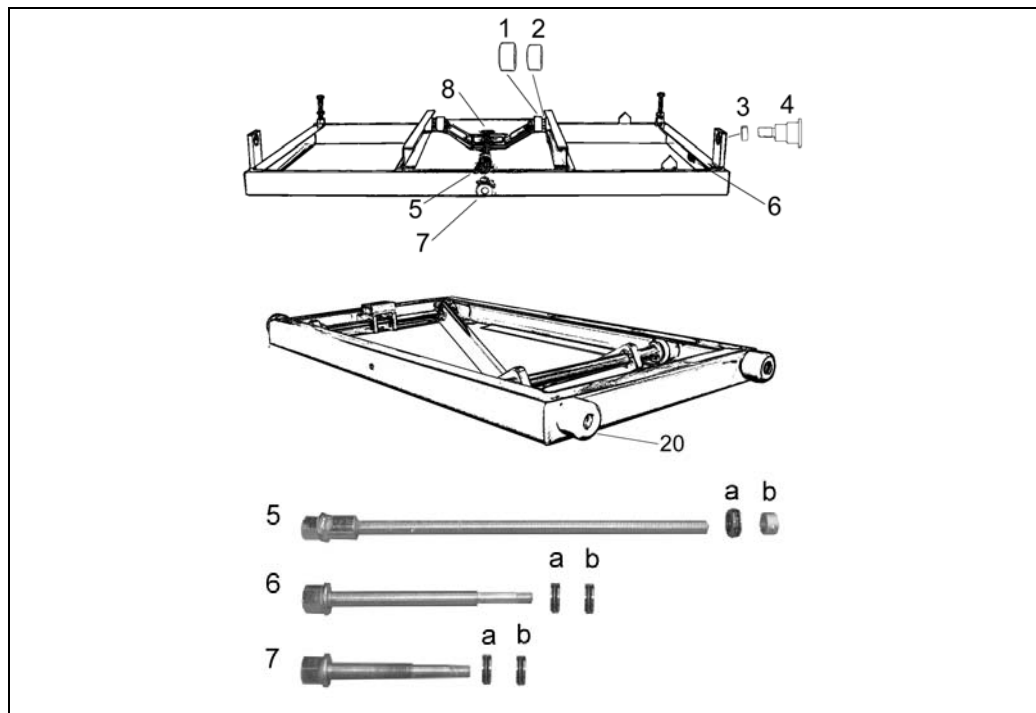


Mechanical Assemblies



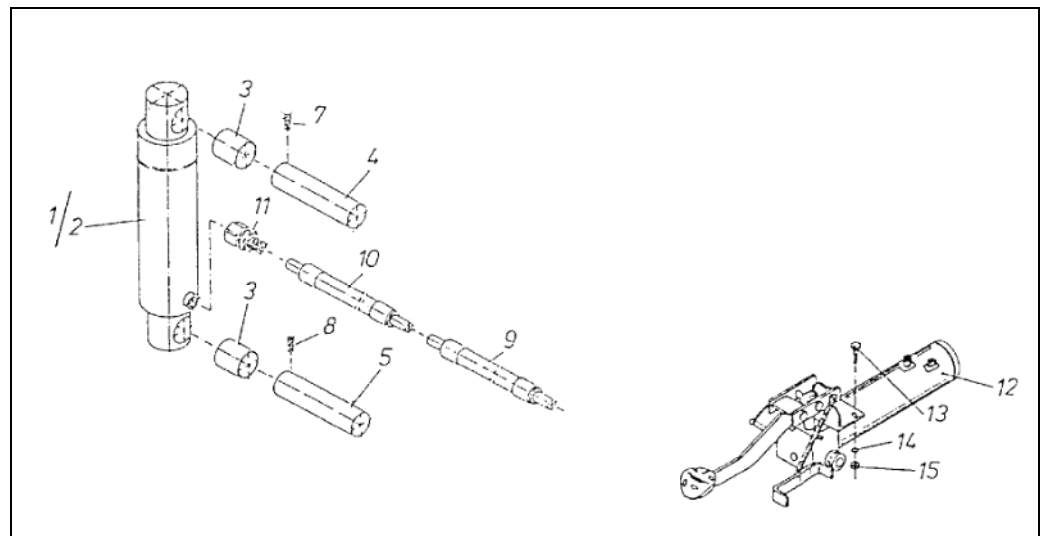
Pos.	Stückzahl	Benennung	Best.-Nr.	Bemerkung
1	1	Rahmen, unten	51.02.654	
2	2	Bockrolle	12.09.211	ø200
3	2	Lenkrolle	12.09.126	ø200
4	16	6kt.-Schraube	12.51.041	M10x20
5	16	Scheibe	12.40.100	11 (DIN 1441)
6	16	Sicherungsmutter	12.55.065	M10 (985)
7	1	Lenkbügel	51.26.044	
8	2	Sicherungsscheibe mit schwarzer Kunststoffkappe	12.24.560	Für Ø 16 mm
9	2	Zugfeder	12.23.207	3,2x20x135
13	1	Schere, innen, unten	51.11.352	
14	1	Schere, außen, unten	51.11.353	
15	1	Scherenarm, oben, rechts	51.11.351	
16	1	Scherenarm, oben, links	51.11.350	
17	1	Schere, innen, oben	51.11.354	
18	18	Buchse	10.02.250	20x23x20
19	16	Buchse	10.02.251	20x23x15
20	2	Aufnahmebolzen	55.56.136	
21	4	Buchse	55.65.105	
22	8	Scheibe	12.40.090	A10,5 (9021)
23	4	6kt.-Schraube	12.51.302	M10x90 (931)
24	4	Sicherungsmutter	12.55.065	M10 (985)
25a	4 / 2	Laufrolle, Sacklochbohrung Ø 25	10.09.679	PA 6; Ø60x48,5
25b	0 / 2	Laufrolle, Durchgangsbohrung Ø 25	10.28.202	PA 6; Ø60x48,5
26	4	Sicherungsmutter	12.55.114	M16 (985)
27	2	Mittelbolzen	55.57.016	
28	4	Scheibe	12.40.135	A17 (9021)
29	2	Gewindestift	12.54.165	AM6x16 (916)
30	4	Rohe Scheibe 9	12.40.080	(1441)
31	4	6kt.-Mutter	12.55.041	M8 (934)

Sliding and Tipping Platform



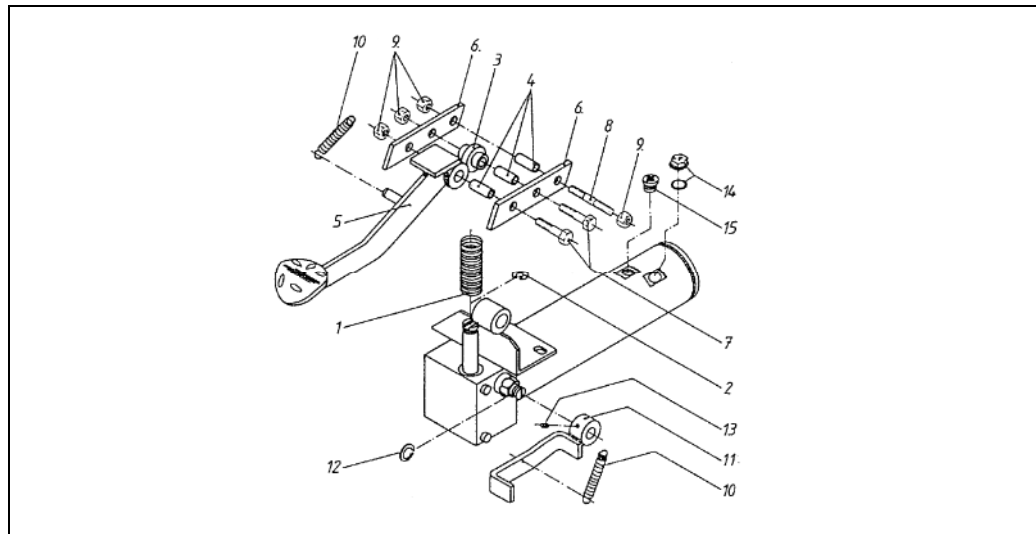
Pos.	Stückzahl	Benennung	Best.-Nr.	Bemerkung
1	2	Führungsrolle	10.18.214	PA 6.6 Ø 45x23 mm
2	2	Führungsrolle	10.28.219	PA 6.6 Ø 42x23 mm
3	2	Buchse	10.02.272	GSM 25-28-12
4	2	Lagerbolzen	12.16.159	
5	1	Spindel, Neigung	57.78.082	verzinkt
5a	1	Axialrillenkugellager	10.02.031	DIN 711-511 03
5b	1	Stellring	12.16.612	DIN 705-A16
6	1	Spindel, Längsverschiebung	52.78.081	verzinkt
6a	1	Axialrillenkugellager	10.02.031	DIN 711-511 01
6b	1	Axialrillenkugellager	10.02.031	DIN 711-511 01
7	1	Spindel, Querverschiebung	52.78.080	verzinkt
7a	1	Axialrillenkugellager	10.02.031	DIN 711-511 01
7b	1	Axialrillenkugellager	10.02.031	DIN 711-511 01
8	1	Mittelbolzen	12.16.066	Rd. 30x43 DIN 668-S235JRG2K
20	4	Laufrolle mit Durchgangsbohrung Ø 25 mm	10.28.202	PA 6; Ø60x48,5

Hydraulics



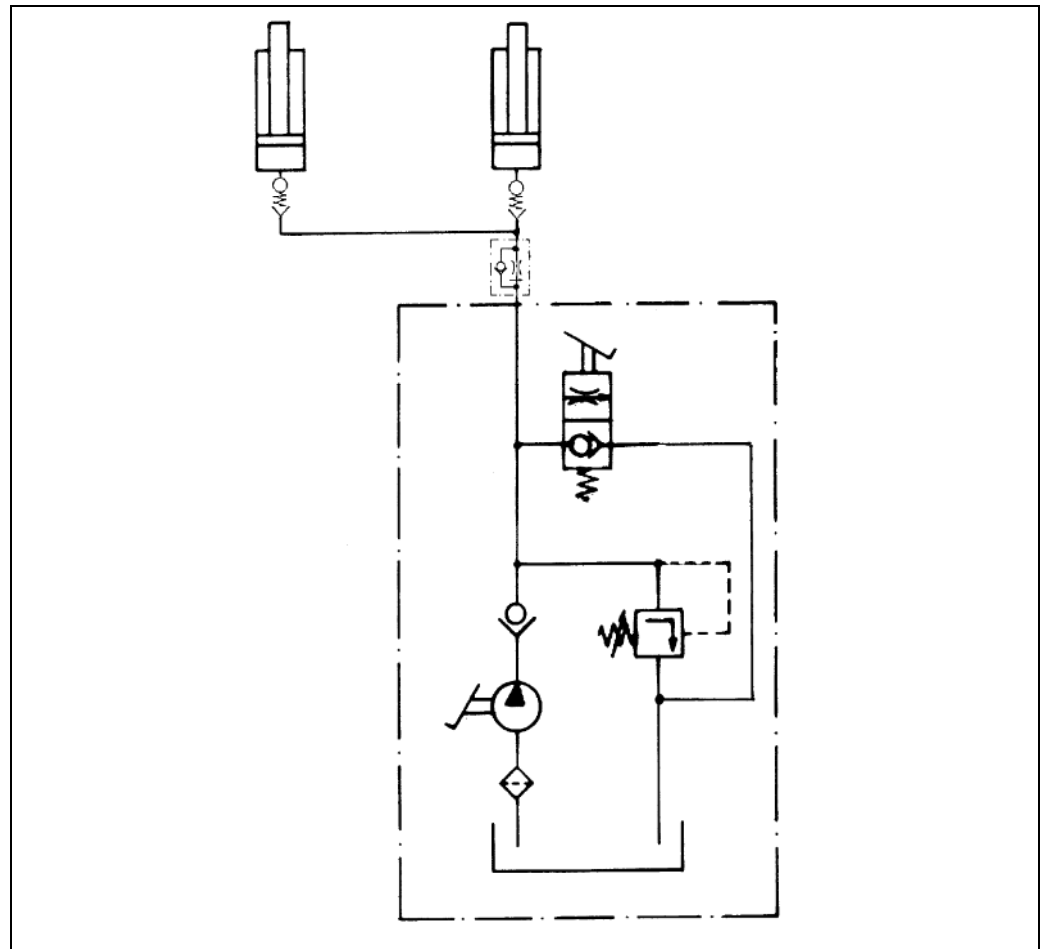
Pos.	Stückzahl	Benennung	Best.-Nr.	Bemerkung
1	2	Zylinder	11.19.071	ø40x450/600
2	2	Dichtungssatz	50.97.066	ø 40
3	4	Buchse	10.02.264	16x18x20
4	4	Bolzen	55.56.132	ø16x66
5	2	Bolzen	55.56.132	
7	2	Spannhülse	12.54.165	
8	4	Gewindestift	12.54.165	AM6x16 (916)
9	1	Hydraulikschlauch	10.19.103	1050mm lg.
10	1	Hydraulikschlauch	10.19.116	400 mm lg.
10a	1	L-Verschraubung	12.19.237	
11	2	Leitungsbruchsicherung	10.19.415	
12	1	Fußpumpe	12.19.358	Tank 450 mm
13	2	6kt-Schraube M8x25	12.50.081	(933)
14	2	Scheibe A8,4	12.40.075	(125)
15	2	Sicherungsmutter M8	12.55.042	(985)

Foot pump



Pos.	Stückzahl	Benennung	Best.-Nr.	Bemerkung
1	1	Spiralfeder	12.17.015	
2	1	Sprengring	10.17.014	DIN 471 D = 20 F7
3	1	Bewegungsrolle	12.17.016	gehärtet
4	3	Hülse	12.17.017	
5	1	Fußpedal	12.17.050	
6	2	Verbindungsstück	12.17.018	
7	2	6kt.-Schraube	12.51.201	M10 x 60 DIN 931
8	1	Bolzen	12.17.019	
9	4	6kt.-Mutter	12.55.061	M10 934 8.8
10	2	Zugfeder	12.17.020	
11	1	Senkpedal	12.17.041	
12	1	Sprengring	10.17.040	d = 12
13	1	Gewindesttiff	12.50.022	AM 8 x 12 DIN 916
14	1	Ölschauglas und Dichtring	10.17.042	R 3/8"
15	1	Entlüftungsschraube	10.28.616	R 3/8"
	1	Dichtungssatz	50.97.058	

Hydraulic plan



Operating Instructions

Appendix

Labels

Best.-Nr.	
10.33.268	
10.33.241	
10.33.243	
10.33.244	
10.33.237	
10.33.342	
10.33.343	
10.33.344	



BlitzRotary GmbH

Hüfinger Straße 55
D-78199 Bräunlingen
Telefon +49.771.9233.0
Telefax +49.771.9233.99
info@blitzrotary.com
www.blitzrotary.com

