

Operating Instruction Floor-running pit lifts



Date



Serial number



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1 Saftey

1.1 Safety instructions in this manual



Risk to life and limb.



Warning

Material damage.



Information and tips.



Operating InstructionIntroduction

2 Introduction

BLITZ lifts represent the result of an experience lasting for years. The high demand for quality as well as the superior concept guarantee reliability, high durability and economic operation. To avoid needless damage or danger, you should read carefully and observe these operating instructions. These operating instructions are valid for underfloor lifts running on rail carriage (Fig.1) and for freely moveable lifts(Fig.2).

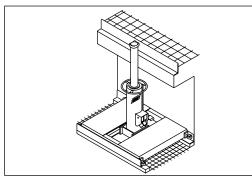


Fig. 1:

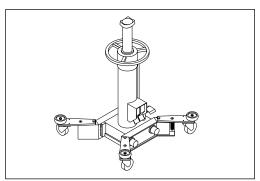


Fig. 2:

2.1 Application range of BLITZ PIT LIFTS

BLITZ Pit Lifts are only to be used for partial lifting of vehicles with follow up support and/ or lifting or lowering of vehicle parts (as e.g. engines, gear-boxes etc.). The total load must not exceed the allowable capacity of the pit lift.



Any other use above the described function is not allowed.

BlitzRotary GmbH will not take any responsibility for damages resulting from misuse. The risk is entirely on the part of the user.

The appropriate operation also covers:

- observation of all items of these instructions for use and
- the carrying out of Inspection- and Serviceworks and the specified tests.

2.2 Warranty and Liability

Generally our "General Conditions of Sales and supplies" are valid. These are available to the user as of the time of contracting. Warranty- and Liability- claims for personal and property damage are excluded if based on one or more of the following reasons:

- use of the lift contrary to its destined application.
- inexpert mounting, set to operate, running and maintaining the pit lift.
- Operation with condensate- and/or dirtholding compressed air.
- Operating of the pit lift with defect safety devices or inexpertly mounted or not functionable safety and protection devices.
- Neglecting the remarks in the instructions for use concerning transport, storage, mounting, starting, operating and maintening of the pit lift.
- · Unauthorised changing of the pit lift.
- Insufficient control of parts, which are liable to wear.
- Inexpertly carried out repairs.
- Cases of catastrophy by foreign matters and Act of God.

Service-requests and cost for returning, caused by non-observation of the listed points, cannot be accepted by us. Therefore in case of return please approach the manufacturer.

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Operating InstructionSafety / Accident Prevention

3 Safety / Accident Prevention

The pit lift must only be operated by trained personal. Unauthorised people are not allowed to operate the pit lift!

3.1 Remarks concerning observation of instructions for use

- Prior condition for safety-conform and faultless operation of the pit lift is the knowledge of the general safety remarks and safety instructions.
- The instruction for use have to be observed by all persons working with the pit lift. Especially the chapter "Safety/Accident Prevention" has to be observed.
- In addition to the safety remarks of the instructions for use the regulations and instructions being valid at the place of operation have to be considered.

3.2 Obligations of the operator

The operator is obliged to allow only those persons complying to the following requirements to work at the unit

- being well acquainted with the basic regulations concerning labour safety and accident prevention and being trained to operate the unit
- having read and understood the chapter concerning safety and warning instructions and confirmed that by their signature.

3.3 Dangers when operating the pit lift

BLITZ Pit Lifts are designed and built according to technical standard and the approved regulations for technical security. Yet, danger for body and life of the operator may turn up when using the pit lift inexpertly.

The unit must only be operated

- for its appropriate use
- in unobjectionable condition concerning technical security



Warning

Disturbances prejudicing the safety have to be removed immediately.

- The pit lift must only be operated when there is no danger for persons.
- The motion area of the pit lift must be held free.
- No persons should be allowed within the motion area of the pit lift.
- The allowable capacity of the pit lift must not be exceeded.
- Entering of the pit lift, ascending with it and mounting of the load is forbidden.
- The lift must only be loaded centrically, lift the vehicle, look for safe harbouring of it and only then can the vehicle be lifted to the desired height. Secure vehicle against rolling off.
- Lifting and lowering movements must be carried out evenly. While in motion observe the load.
- Lifted load must be secured by supporting bridges or tripods.
- The lifter may only be operated on a level surface with a suitable load-bearing capacity
- The incline of the pit must not exceed 1°.

3.4 Organizing requirements

- The instructions for use are constantly to be kept at the place of operation being at hand at any time.
- In addition to the instructions for use rules pertaining to other regulations i. e. accident prevention and environmental rules are to be observed and directed.
- Safety- and dangeralert operation of personal is occasionally and by observing the instructions for use to be controlled.
- As far as required and ordered by regulations personal protective equipment is to be used.
- All safety- and danger-hints at the pit lift are to be observed.
- Keep all safety- and danger-hints at the pit lifts in readable condition.
- Changes, additional mountings or constructional variations impairing the safety must not be carried out without the approval of the manufacturers. This goes particularly as far as welding works at carrying parts are concerned.
- Spare parts must comply with technical requirements laid down by the manufacturer. This is only warranted with original parts.



Operating InstructionSafety / Accident Prevention

 Consider time intervals given or fixed in instructions for use for repeated tests/ inspections.



In case of malfunction stop and secure the pit lift immediately. Care for remedy of faults immediately.

3.5 Maintenanceworks, remedy of faults and disposal

- Fixed Adjusting-, maintenance- and inspectionworks and time intervals including details for exchange of parts/ part components as mentioned in the instructions for use are to be adhered to. These works must only be carried out by expert personal.
- After maintenance- and repair works loose screw connections must always be firmly tightened.
- Care for safe and friendly to environment disposal of operating and auxiliary process materials as well as exchanged parts.

3.6 Special Dangers

Hydraulic, Pneumatic

- Works at hydraulic devices must only be made by personal with special knowledge and experience in hydraulic!
- All tubes, hoses and connections must in regular intervals be checked for leaks and visible damages. Damages must be repaired immediately. Splashing oil may lead to injures and fire!
- Pressure lines to be opened (hydraulic, pneumatic) must be set pressureless prior to starting repair works.
- Hydraulic- and pneumatic lines are to be laid out and mounted in an expert way. Do not interchange connections. Armatures, lengths and quality of tubings must comply with the requirements.

Oil, grease and other chemical stuff

While handling oils, greases and other chemical staff the existing safety rules as they are valid for the single products are to be observed.

Complying Safety Standards

DIN EN 292 / DIN EN 294 / prEN 349 / EN 414 / EN 418 / prEN 811 / EN 50099 / EN 60204 ISO 1219 / ISO/DIS 11530

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5



Technical data

4 Technical data

Model					Pit	Star/F	Pit Bo	y/Big	Jack			
		14/ 14/7	4/ 1,5	10/ 4	14/ 14	20/ 14	6	10	14	20	30	14/ 14/14
									•		•	
Capacity 1. stage	t	14	4	10	14	20	6	10	14	20	30	14
Capacity 2. stage	t	14	1,5	4	14	14						14
Capacity 3. stage	t	7										14
Lifting height	mm	1000	1100	1100	1200	1200	800	800	800	800	800	1100
Admissible connecting pressure	bar						15					
Working pressure hydraulic	bar	220	80	199	278	278	120	199	220	163	245	298
Working pressure pneumatic	bar	12	6	10	12	12	7	10	11	88	12	12
Oil contents tank 1	I	1,8	5,0	5,0	11,8	11,8	5,5	5,5	6	1,8	1,8	208
Oil contents tank 2	I	1,5	1,2	1,2	2,1	2,1	1,2	1,2	1,3	2,1	2,1	
Weight	kg	320	195	195	387	387	220	240	273	340	340	350
max. lowering speed at nominated load	m/s						150					
max. sound intensity	db(A)						<83	3				

5 Transport

During transport it is to be observed that in the horizontal position of the Lift the control instruments are to show upwards, as otherwise oil may be lost. (see also red label at pit lift)



Operating Instruction Mounting

6 Mounting

- Lifts running on rail carriage are adapted exactly to the width of your pit. Use the lift only in the pit made for.
- Equip pit bottom on both sides with angle profile all over its length. (e.g. 100x100x8 DIN 1028, UST 37-2)
- For reasons of safe working conditions separate lifting unit from rail carriage when installing the lift into the pit. Open hexagonal socket screws (1) and remove covering plates (2). Remove lifting unit through the gaps (3).

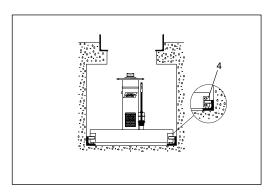


Fig. 5:

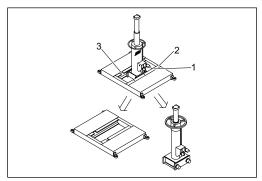


Fig. 3:

• Lower rail carriage and lifting unit into the pit with a suitable crane and mount lifting unit in rail carriage.

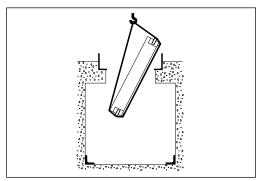


Fig. 4:

 Adjust the rollers (4) to the width of your pit. Take care for safe running of the lift all over the length of the pit.

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Operating InstructionInitial Operation

7 Initial Operation



Warning

The pit lift must be examined by an expert prior to first operation for proper installation in the pit, completeness and function. The result is to be entered into an examination book. (These books are available from the manufacturer)

7.1 Prior to starting operation

- → Compressed air supply must only be done via a service unit with water separator, oiler and pressure reducer installed directly in the pit. The unit has to be set to 13 bar. For the oiler must be used only non resinous hydraulic oil like HLP22.
- → Check oil level
- → De-air hydraulic

8 Handling and Operation



Warning

When operating the pit lift you will have to observe all instructions from section "safety" and the instructions for the valid accident prevention regulations.

- The pit lift must only be operated by specially trained personal.
- Pit lifts should only be put into movement when no persons are endangered.
- The movement range of the pit lift must be kept free and no persons should stay in the moving region.
- The maximal allowable capacity of the pit lift must not be exceeded.
- Standing on the pit lift, being lifted by it and mounting of load is not allowed.
- The lift must only be loaded centrically, lift the vehicle, look for safe harbouring of it and only then can the vehicle be lifted to the desired height.
- Lifting and lowering movements must be carried out evenly. While in motion observe the load.
- Lifted load must be secured by supporting bridges or tripods.

8.1 Load lifting

For load lifting the car wheel should be able to afterrun. (open break and put gear into neutral)

- → Button "Quick Lift" (1) to be pressed until carrying plate has reached the load carrying point.
- → Load carrying device to be lead to even points meant for load lifting by car manufacturers.
- → Button "Pneumatic Motor" (2) to be pressed until vehicle is slightly lifted.
- → Ensure safe harbouring of vehicle.
- → Button "Pneumatic Motor" (2) to be pressed until the load has reached the desired height.
- → Secure vehicle against rolling off (drag shoe) and use supporting bridge.



Operating InstructionIntroduction



For exact adjustment of desired height and in case of insufficient airsupply pumping can be done by the foot hydraulic pump (3).

8.2 Lowering of load



Lowering motion to be carried out slowly and evenly. Observe the load during Motion.

- Remove roll-off-security measure (drag shoe)
- Lift vehicle slightly and remove supporting bridges.
- For lowering the load move lever (4) to the front and turn slowly to the right.



The lowering speed will be regulated steplessly by the turning movement.

→ Return lever (4) into rest position.

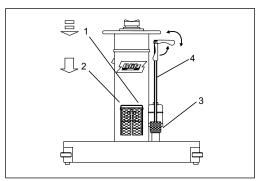


Fig. 6:

Load Carrying Devices

For safe lifting of vehicles and vehicle parts by means of the pit lift various load carrying devices are available, such as carrying plates, axle traverses, gear-box plates, special pick-up device

Supporting Bridges

Lifted vehicles have to be secured by means of supporting bridges or trestles. Supporting bridges are always manufactured according to pit measurements. Their safe support must be granted over the whole length of pit.



Informations for use

- The allowable capacity of the load carrying device must not be exceeded.
- Irrespective of the load carrying device the load-centre-point always has to be exactly over the pit lift.
- Use only load carrying devices with correct diameter of pin.
- · Do not stack extension pieces.
- Vehicle parts must only be transported on the pit lift if it is completely lowered and if parts are secured with tapes or chains prior to being moved.

For further information concerning the complete program for load carrying and load supporting devices please approach the manufacturers.

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Troubles/Reasons/Remedies

9 Troubles/Reasons/Remedies

Piston rod does not move up completely.

Reason	Remedy					
Insufficient oil in tank.	Refill oil up to recommended quantity. (see oil change in section "Maintenance and repair")					

Piston rod does not move up or descends under load.

Reason	Remedy
Ball valves untight or lip ring damaged.	Ask for service people!

Pit lift looses oil at the control.

Reason	Remedy
Condensate in hydraulic oil.	Check oil level, if required drain condensate (see section "Maintenance and repair").
Piston gasket untight	Ask for service people!

Loosing oil at the piston.

Reason	Remedy
Piston damaged and consequently seal damaged.	Ask for service people!

Push button blocks

Reason	Remedy
Contamination/damaged in the control.	Exchange control (see section "Mainte- nance and repair")



Operating Instruction Troubles/Reasons/Remedies

Permanent exit of air at control.

Reason	Remedy
Contamination in control/ seal damaged	Exchange control (see section "Mainte- nance and repair").



Operating Instruction Maintenance and repair

10 Maintenance and repairr

<u>(i)</u>

Warning

- Maintenance and repair works must only be carried out by specialists at unloaded, pressureless lift.
- After finishing maintenance and repairs loose screw connections are to be tightened properly.
- Care for safe and environmentfriendly disposal of operating and auxiliary process materials (hydraulic oil) as well as exchanged parts.
- The lifting devices are to be kept in proper condition and prior to its use are to be checked for safety to the personal and the vehicles.
- Prior to all maintenance and repair works disconnect the pit lift from the air supply!
- After having finished work at the hydraulic system it must by all means be de-aired.
- After all Maintenance and repair works test the pit lift and enter the result into the examination book.

10.1 Maintenance works

General

- The ram and the pin of the load carrying device must be kept free from sand and dirt.
- While working with adhesive under bottom agents or with lacquer the ram must be protected.
- The pit lift should not be cleaned with high pressure or steam cleaners.
- For cleaning the pit lift no aggressive cleaning agents should be used.

Time-fixed works

Weekly

- Service-unit of compressed air-line to be checked and serviced.
- The pin of load carrying devices as well as the hole of the pit lift should be cleaned and sprayed with a rust protecting oil.

Quarterly

- → Check oil level
- → the pit lift rolls should be creased (5)

Yearly

→ Oil-change

10.2 Description of Maintenance works

- → De-Airing of hydraulic system
- → Footpump (3) to be operated 5 to 10 times with simultane operation of the lowering valve (4).

Oil level control

Prior to oil level control

→ Disconnect the pit lift from the pressure line.



2 oil levels will have to be controlled.



Maintenance and repair

Oil level 1 (Container for load stroke)

- lifting ram to be descended completely.
- → Remove oil bar (1) by unscrewing and check oil level.

Oil level 2 (container for descending)

(Not for 3-stage telescopic lift)

- lifting ram to be ascended completely.
- → Oil bar (2) to be unscrewed and oil level to be checked.

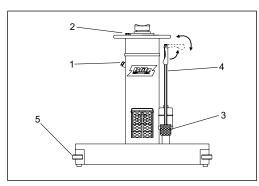


Fig. 7:

Oil change

BLITZ Pit lifts are equipped with 2 hydraulic drives. The lower one actuates the load lifting. The upper one supports the return action and overflows with every lifting- and lowering motion the cylinder with oil. Thus an optimal rust protection over the complete cylinder surface is reached.

For oil change you will require:

- Oil tray
- Hydraulic oil, class HLP, viscosity ISO-VG 10, 22 or 32. (e,g,HLP 10). Quantity of oil see technical data.
- 4 seal rings (spare part catalogue items 28, 315, 337 and 379)

Before changing oil

- · disconnect pit lift from air supply.
- In case of units with rail carriage the lifting unit has to be separated from the carriage



You will have to change oil contents from two different oil containers! (Not for 3-stage telescopic lift)



Warning

Drain oil into a suitable container and care for proper disposal.

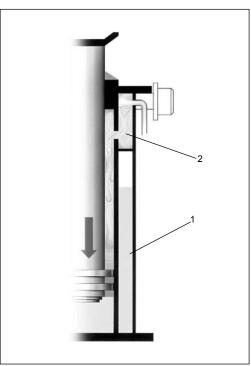


Fig. 8:

Oil container 1 (container for load stroke)

- → descend ram completely.
- oil drain screw (4) to be taken out and oil to be drained.
- oil drain screw (4) with seal ring to be inserted and fixed tightly.
- → Oil bar (3) to be turned out.
- → refill oil up to recommended level.
- Oil bar (3) with seal ring to be turned in and fixed tightly.



Operating InstructionMaintenance and repair

Oil container 2 (Descending)

(Not for 3-stage telescopic lift)

- ascend ram completely
- → turn out locking screw (2) and drain oil.
- → Locking screw (2) with seal to be remounted and tightly fixed.
- → turn out oil bar (1)
- → refill oil up to recommended level.
- → Oil bar (1) with seal ring to be turned in and fixed tightly.

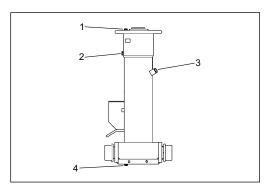


Fig. 9:

11 Repair works

11.1 Exchange complete control

- → Disconnect pit lift from air supply (1).
- → Safety ring (2) to be loosened and axle (4) to be pulled out.
- → Both buttons (6) to be removed.
- hexagonal socket screws (5) to be unscrewed and turned out.
- control (7) to be removed by pulling towards operator.
- → 0-ring (3) to be replaced.
- → New control to be mounted and to be fixed by hexagonal socket screw (5).
- Both buttons (6) and axle (4) to be replaced and to be secured by spring ring.
- → connect air supply (1).

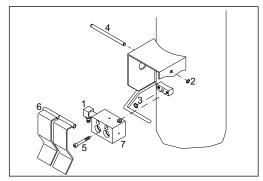


Fig. 10:

11.2 Complete hydraulic pump (Pump block) to be exchanged

- disconnect pit lift from air supply and drain oil (see oil-change).
- → loosen compressed air connection (15).
- → untighten screws (12) and turn them out.
- hydraulic pump (11) to be removed towards operator.
- → replace O-ring (13).
- → remove sieve (14), clean and replace.
- → mount new pump block and fix it with screws (12).
- → reconnect air supply (15).
- refill oil (see oilchange).



Operating InstructionEC Declaration of Confomity

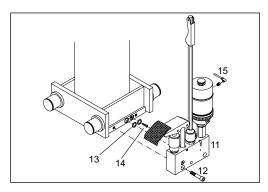


Fig. 11:

12 EC Declaration of Confomity

In the meaning of the EEC Machinery Directive 98/37 EC, Annex II A for installed machines.

This certification applies to the Blitz product floor-running pit lift (Type and Serial No. see at front cover)

The floor-running pit lift was constructed and manufactured in compliance with the regulations of the EC Guidelines.

BlitzRotary GmbH Hüfinger Straße 55 D-78199 Bräunlingen

The following harmonised standards were applied:

- 37/23 EWG
- 89/336 EWG
- EN 1493
- EN 60204.1

A complete technical documentation is available. The operating instructions that belong to the floor-running pit lift are on file.

Bräunlingen, 07.06.2007

C. Rohde, Management

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Appendix

13 Appendix

13.1 Adhesive notices

Order No.

3600011	Typ Type Type Type Type Type Type Type T
3303922	max. 6000 II
3304922	max. 10000 T
3305922	max. 14000 T
3680922	max. 16000 T
3306922	max. 20000 kg
3626922	max. 30000 kg
3304922	Stufe stage 1. max. 4000 kg
3312922	Stufe stage 1. max. 6000 kg
3305922	Stufe 2. 1 max. 14000 kg max. 14000 kg
3306922	Stufe stage 1. max. 14000 kg
3748922	Stufe 3. stage 2. max. 14000 kg



Operating Instruction Appendix

Order No.					
708695	Ach	tung!	Attention!	Attention	ı!
	Schäd verme bei Tra Lager	lverlust und len am Heber i iden, müssen ansport und ung Bedien- nte nach oben n.	the lift, all operating elements must be in upright position	of d'huile et dor g au vérin, tous n éléments d'o _l doivent mont	nmages les peration rer en te pen-
860930	Wichtig	!	Important!	Important	!
	zerstört • Installie deshalb Heber e Wassera	ftleitung den Heber ren Sie vor dem inen abscheider Sie diesen	Condensate in the air line destroys the lift Therefore a water separator should be installed before the lift This must be serviced regularly	Condensé d ligne d'air d vérin A cause de separateur doit être ins avant le vér Il faut le ser régulièreme	étruit le ça un d'eau tallé in vir
3240923					
	Achtun	g!	Attention!	Attention!	
	Heber funi nur, wenn triebnahm schlußsch gegen bei Entlüftung getauscht	vor Inbe- e Ver- raube liegenden sstopfen	Lift only works when prior to initial use the locking screw is replaced by the enclosed deairing plug.	Le vérin foncti seulement si a première mise marche la vis fermeture est cée par le bou de dégagemen	evant la en de rempla- achon
3320923					
	Überwurfn entfernen leitung an Andernfal Funktion o bers.	nutter und Luft- schließen. Is keine	Attention! Remove screwed cap and connect with air line. Otherwise the lift will not function	chapeau et co au ligne d'air.	à onnecter Autre- ionc-
3600.920	Betriebsal - Unbetighen P - unterichtetes - Grubenheber - auf die gewün - Grubenheber - Hub und Seni beobachten. B - Der Auferthall - Höchstzulässi - Das Besteligen - Die ausführlich - Die ausführlich - Die ausführlich - Im Störungsfa	rsonen ist das Bediener Personal. Die gesetzlich ur zentrisch belasten. Ri- kothe Höhe anheben. Fal ur in Bewegung setzen, bewegungen gleichmäß ewegungsbereich des G von Personen im Bewej je Tragfähigkeit nicht üb des Grubenhebers, das hillen, die angehöbene Li e Betriebsanleitung ist I nicht selbständig am G und Kundendienst vers	eber ist verboten! I des Grübenhebers untersagt! Bedienu en Ustallverhötungevorschriften sind z en Ustallverhötungevorschriften sind z en untersagt in der des	u beachten! aufnahme prüfen, dann erst sht! aufgenommene Last ersagt! r Last sind untersagt! ken zu sichem!	
		GH GHL	GHUS(L) G	HUSP HUSLP HUSTP	
	Heben	Pumpenhebel einstecke und pumpen	en Ohne Last: Taste "Schnellhub" drücken Mit Last: Won Hand pumpen Ti	huseT whee Last: aste "Schnellhub" drücken lit Last: aste. "Luftmotor" drücken einhub:	
	Senken	Ohne Last: Hebel nach Mit Last: Hebel kurz na	rechts bis Anschlag schwenken	on Hand pumpen	
	Abschmieren	Wöchentlich: Laufrolle Jährlich: Wälzlager de	r Fahrgestellrollen ausbauen, reinigen u		
	Kondensat ablassen Ölstand	Ölstand 1: Kolbenstans	Bei täglicher Benutzung des He Ölablaßschraube ge vollständig eingefahren, Ölstand auf		
		Ölstand 2: Kolbenstan Tragplatte kontrollieren	ge vollständig ausgefahren, Ölstand an	n Meßstab in der	
	Ölwechrel	Jährlich Ölsorten (* B	HI P 22/HI P 32) und Ölmannan siaha s	uurführliche	
	Ölwechsel Druckluft- versorgung	Jährlich, Ölsorten (z.B. Bedienungsanleitung	HLP 22/HLP 32) und Ölmengen siehe a Die Funktion des Hebers ist nur Druckluft gewährleistet. Dazu si		





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