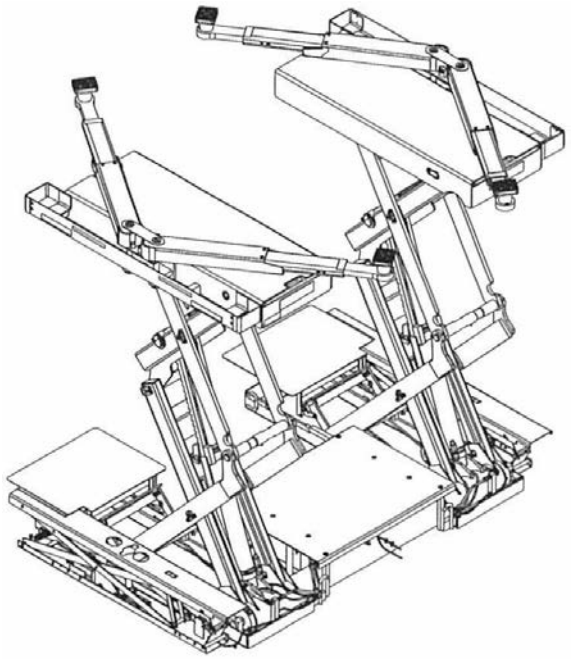
Bishamon®

July 2019

FANTAS Lift
BSC3200 Series

Operation and Service Manual



To Users

Thank you very much for purchasing a FANTAS Lift BSC3200 series lift of Bishamon. Be sure to read this Operation Manual before using the lift and start using only after understanding its contents. Furthermore, keep this operation manual with care and promptly request for a copy if it becomes lost.
If the operation manual is not for the actual lift, request for a correct copy with the retailer from whom the product was purchased.

Notes on Maintenance, Inspection and Control

Perform maintenance and inspection of the lift. Perform periodical maintenance and inspection of the lift, in order to ensure safe operation of the lift and sufficient function of the lift is maintained.

Preface

Before operating the lift, READ and be familiar with this operation manual.
Incorrect operation by not READing and not being familiar with the operation manual may result in not only poor performing of the lift functions but also the falling of the vehicles and accident of injury or death.

The contents of the manual may differ if the purchased lift is modified.
Contact your supplier if the contents of the manual has any unclear statements, error, omission and incorrect collating.

Warning

In this manual,「Danger」,「Warning」,「Caution」are defined and specified as below. Notice of Warnings are very important for safe operations.
As these are very important to protect operations from accident resulting in injury or death, or damage to properties, make certain to understand them fully before operating lift.

Danger Incorrect operation may imminently result in serious injury or death of the operator.

Warning Incorrect operation may result in serious injury or death of the operator.

Caution Incorrect operation may result in injury and damage to property. The possibility of occurance of danger is lower than “Warning” articles.

Table of Contents

1. Objects of the Lift

This lift is designed for indoor use, intended for changing oil and parts, general maintenance work as well as inspection and servicing of light to ordinary passenger vehicles, recreational vehicles, compact trucks (excluding long-body vehicles) and excludes washing of vehicles.

2. Danger, Warning , Caution

As these are very important to protect operators from accident resulting in injury and death, and damage to properties, make certain to understand fully before operating lift.

Warning

In this manual,「Danger」,「Warning」,「Caution」are defined and specified as below.
Notice of Warnings are very important for safe operations.
As these are very important to protect operators from accident resulting in injury or death, or damage to properties, make certain to understand them fully before operating lift.

Danger ・・・・**Incorrect operation may imminently result in serious injury or death of the operator.**

Warning ・・・・**Incorrect operation may result in serious injury or death of the operator.**

Caution ・・・・**Incorrect operation may result in injury and damage to property. The possibility of occurrence of danger is lower than "Warning" articles.**

Danger	
	Never stand under the vehicle while operating the lift. * There is risk of death or serious injury.
	Do not attempt to support a vehicle that appears to be falling but escape instead. * There is risk of being crushed under the vehicle that leads to death or serious injury.

⚠ Warning

Read the Operation Manual thoroughly before using the lift.

* Important warnings are described.
  Failing to follow warnings leads to serious accidents.

Set the center of gravity of the vehicle to within the range specified with yellow color on the lift.

* The vehicle may potentially fall while the lift is raised or lowered, or due to vibration arising from performing work, as well as from detaching and attaching parts.

The “partial lifting” only on front or back, as well as on left or right is strictly prohibited.

* The vehicle may potentially fall or become deformed. There is also a risk of lift becoming damaged.

DO NOT modify the safety device and the lift under any circumstances.

* It may result in serious accident.

The lift must not be used by anyone other than those who are thoroughly familiar with its operating method.

* Improper operation can cause an unexpected accident.

Set the supporter on a flat location with sufficient strength.

* The supporter may come off and the vehicle may potentially fall.

⚠ Warning

Electrical Hazard

DO NOT open control box or remove cover plates without isolating electrical supply.

* It may result in electric shock.

DO NOT lower the lift while any stand or support is in position under vehicle. DO NOT use “Down” motion of the lift for any other purpose except lowering (ex. for putting off parts)

※Supporter contact may come off and it may result in the falling of the vehicle.

Vehicle must be positioned evenly. DO NOT lift offset vehicle.

※.When removing parts or with vibration, it may result is falling of the vehicle and damage to the vehicle.

KEEP FEET FREE from lift and vehicle when operating lift.

※It may result in pinching feet or serious injury.

DO NOT swing, shake or push the raised vehicle.

※When removing the parts or with vibration, it may result in falling of the vehicle.

Removing Components may alter the center of the gravity and cause vehicle to fall.

※Supporter contact may come off and it may result in the falling of the vehicle.

Using anything other than genuine attachments is prohibited.

* Attachments may come off, damaged or the like to cause the vehicle to fall, which may potentially lead to death or serious injury.

⚠ Caution

<Preparation>

1. This lift is designed for maintenance and servicing of vehicles. Do not use the lift for purposes other than those for which it is intended.
2. Stop using the lift if even a single safety device fails to operate properly.
3. Wet tires and supporters require attention, as they can cause slippage.
4. Pay attention to prevent a hand or finger from becoming trapped when using and storing the sliding supporter.
5. Adjust the height of supporters to evenly distribute the load among the four supporters when using the swing arm.
6. Lifts on the left and right are linked for synchronization and are not able to take extremely unbalanced loads.
7. The difference in load applied to supporters on the left and right must be within 300 kg when using the lift. Failing to do so may potentially cause damage to the lift.
8. Set the supporters securely at lifting points and do not raise a vehicle when there are no clear lifting points on the vehicle. Refer to the maintenance manual of the vehicle for information on correct lifting points.

<Lifting & lowering>

1. Pay attention to the condition of the vehicle while operating the lift to raise or lower and never operate the lift while looking elsewhere.
2. In the event there are other lifts at the same site, avoid erroneous operation with operating buttons for other lifts.
3. Do not lift any vehicle that exceeds the maximum capacity of the lift.
4. Do not lift a vehicle with people or cargo still on board.
5. Make sure there is no oil or soil on supporter when raising a vehicle.
6. Stop lifting after Supporter have made firm contact with vehicle and check locations of Supporter for correct lifting points before reraising the vehicle.
7. Pay attention to tilting of the vehicle on the lift when raising or lowering and make sure that the vehicle is kept horizontal at all times.
   Stop operating the lift immediately if the vehicle tilts.
8. In the event the lift does not lower even when the lowering button is pressed, raise it once and then lower it.
9. When lowering the lift with the sliding supporters in use, stow them after tires of the vehicle comes into contact with the floor, then lower the lift to the lowest position. Failure to do so may potentially cause damage to the supporters or the floor surface.
10. Do not operate the lift while tools or parts are left inside the pit or on movable parts of the lift unit. Doing so may result in malfunction of the lift or vehicle falling.
11. Do not approach the lift or touch the lift while raising or lowering a vehicle.
12. Raise or lower the lift only after verifying the vehicle and lift surroundings to ensure that there are no people or objects.
13. Drive the vehicle in and out only after the supporters have been lowered completely. Drive the vehicle in and out only after the swing arms have been opened completely. Failure to do so can cause damage of the vehicle or the lift.

⚠ Caution

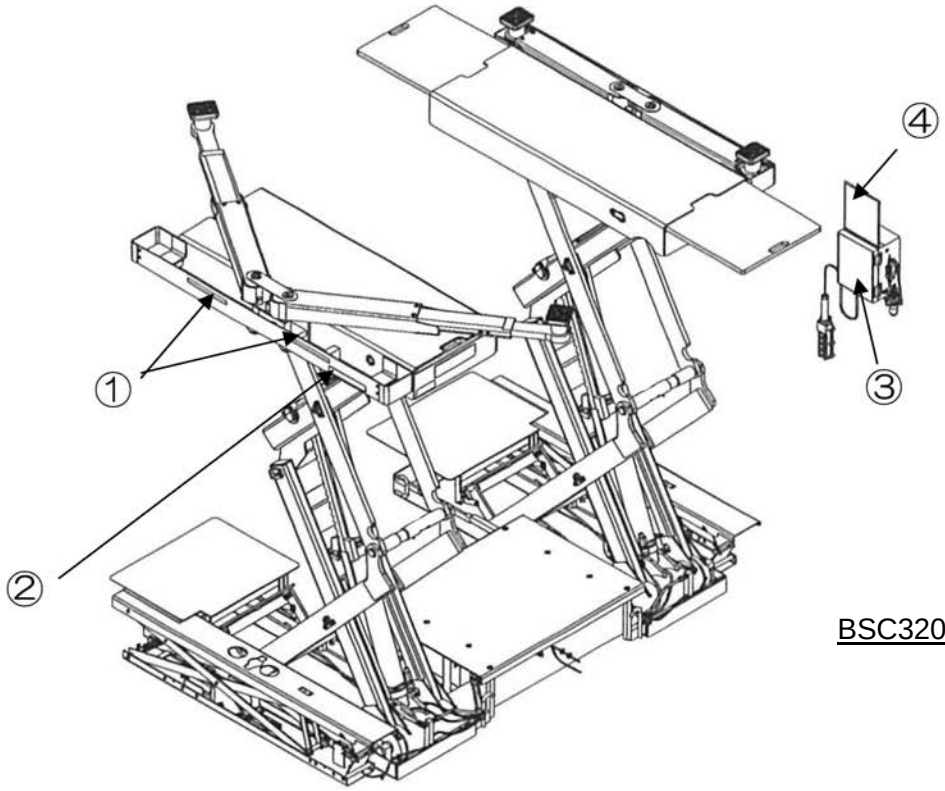
<Generally>

1. Always bring the lift to the lowest position when moving away from the lift or when not using the lift.
2. Start lift operations only after verifying that Lowering Stop Hook are “Engaged”.
3. Do not allow anyone other than trained mechanic to approach the lift.
4. Do not leave the lift with a vehicle raised unattended for long periods of time. A vehicle left on the lift at a low position without engaging Lowering Stop Hook tabs may potentially cause the vehicle to be lowered and damaged.
5. Bring the lift down to the lowest position and turn off power when the vehicle servicing has been completed.

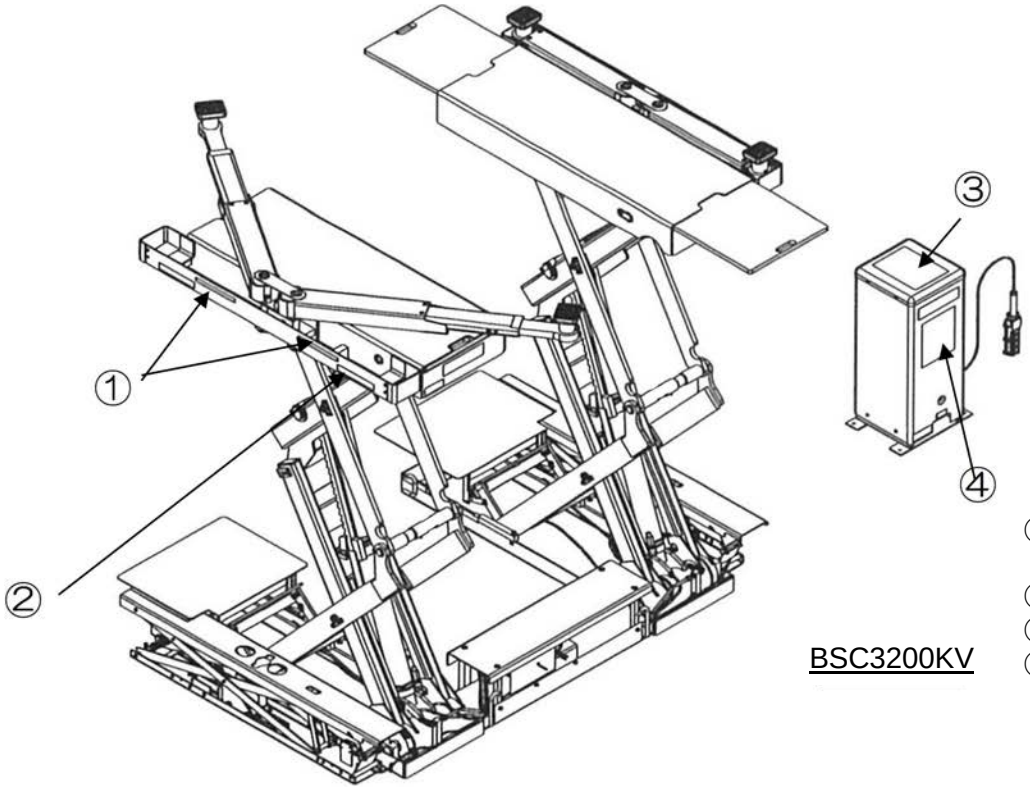
<Others>

1. Do not modify the lift in any way. Doing so can prevent the lift from performing sufficient functions, which may potentially lead to a serious accident.
2. Do not use any supports other than genuine side sill blocks.
3. Stop using the lift immediately and repair any anomalies when any anomalies are discovered while in use or during inspections. Do not use the lift until the repair work is completed.
4. The lift is not built with water resistant specification. Do not use the lift for washing vehicles or outdoors, or in locations where humidity is high.
5. Do not supply air with a pressure that reaches or exceeds 1.0 MPa to the filter regulator. Doing so may potentially damage filter regulator.
6. The filter regulator must be set to 0.7 MPa. Setting it to any greater pressure may potentially damage the Selex valve.

3. Locations of Warning Labels



BSC3200KUV



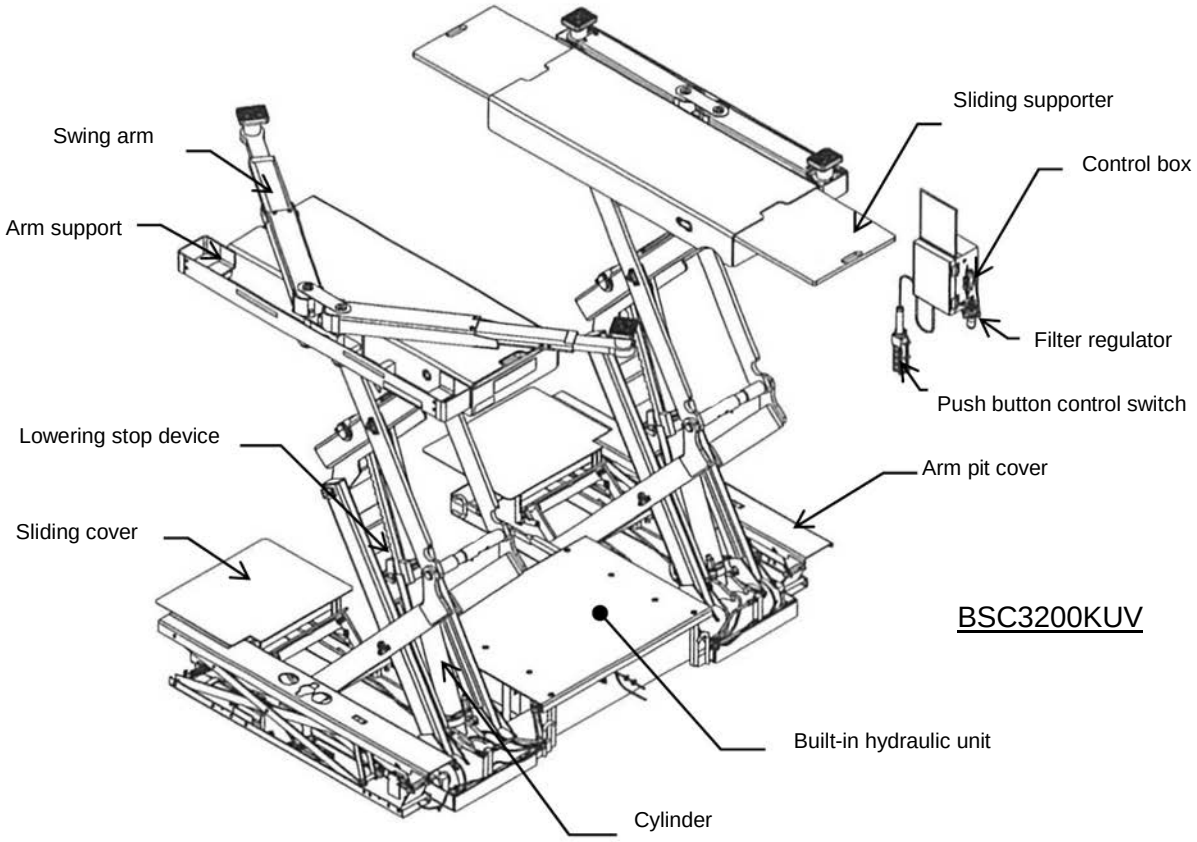
BSC3200KV

① “Center of Gravity Position” label
② Capacity label
③ Caution label
④ “Danger” and “Warning” labels

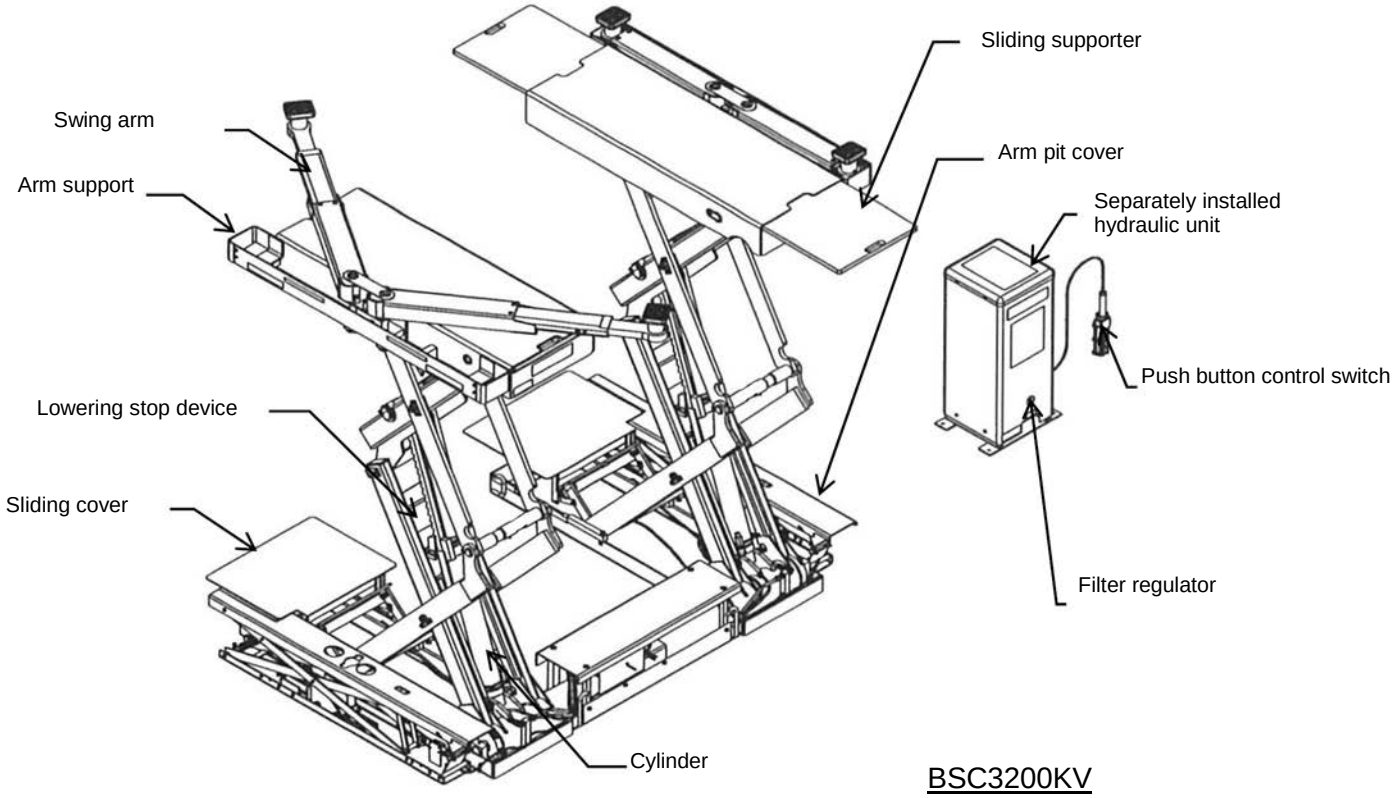
⚠ Caution

Labels feature descriptions on important matters for preventing personal accidents and property damages, as well as capacity of the lift. Purchase and apply these labels promptly when they become worn, damaged or peeled off while the lift is used.

4. Components of the Lift



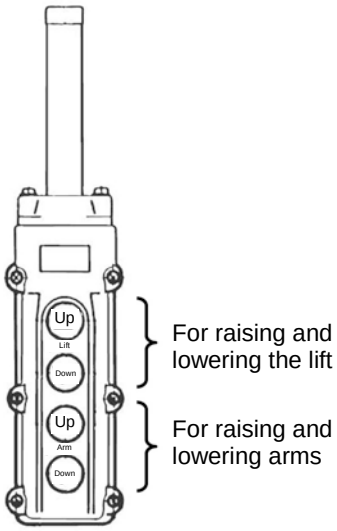
BSC3200KUV



BSC3200KV

Push button control switch

This is switch for raising and lowering the lift and arms.



● Switch for raising and lowering lift

Press Up button to raise the lift and release it to stop the lift at that position.
Press Down button to lower the lift and release it to stop the lift at that position.
The Up and Down buttons cannot be operated at the same time.

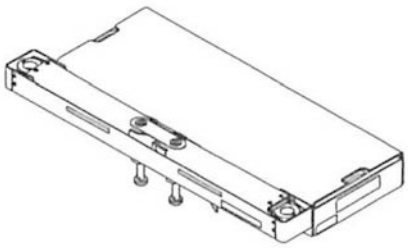
● Switch for raising and lowering arms

Use these switch when the lift is at the lowest lowered position.
Press Up button to lift the arms to the swinging height.
Press Down button to lower the arms to be stored.
Down button can only be used when the lift at the lowest lowered position.
The Up and Down buttons cannot be operated at the same time.

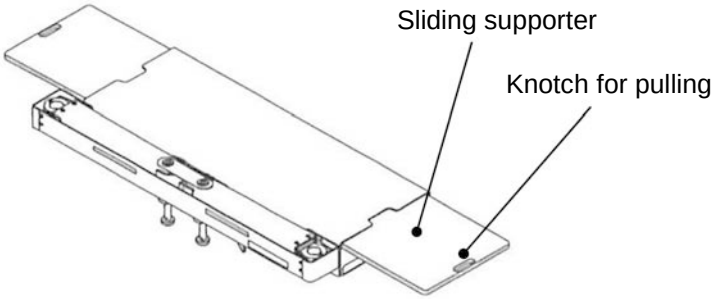
Sliding Supporter

The lengths of sliding supporters can be adjusted in variable range of 1,320 to 2,200 mm, depending on jack points of the vehicle being lifted. There is a knotch for pulling on the upper surface of the sliding part. Slide the sliding supporter using the knotch for pulling.

When stored



When sliding



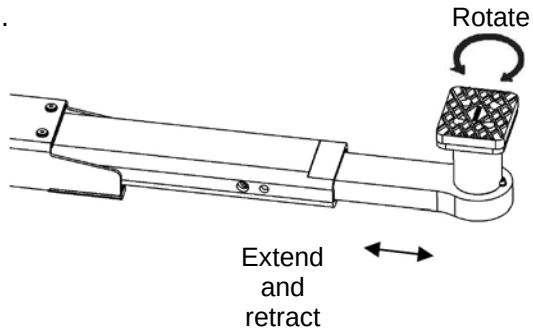
⚠ Caution

Make sure that the sliding supporter is completely stored when storing the sliding supporter.

Swing arm

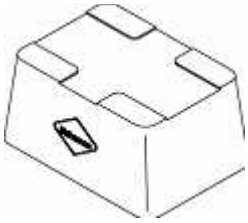
Swing arms can be freely rotated, extended and retracted within the range of about 90 degrees to align rubber mounts to jack points.
Swing arm is more suitable to lift up one box car and SUV (RV) which can not be lifted up by plate type supporter.
Adjustment of length is possible within the range of 550 to 1,100 mm.
Heights of rubber pads can be adjusted by rotating them.

Entire arms can be stored inside the pit by retracting the swing arms to the MIN position.



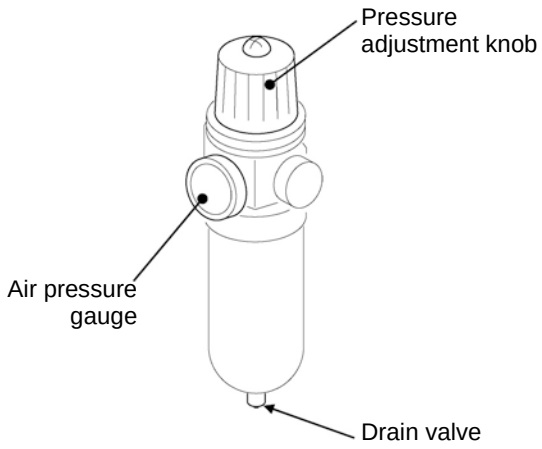
Side sill block

Can be used for ordinary passenger vehicles that are lifted with side sills.

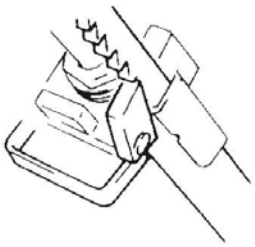
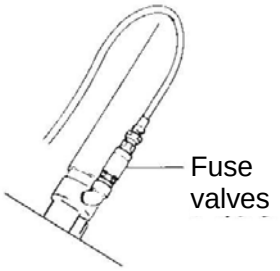
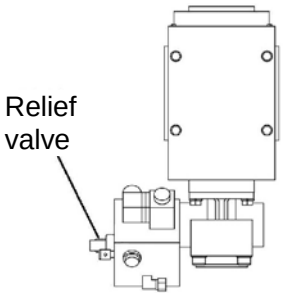
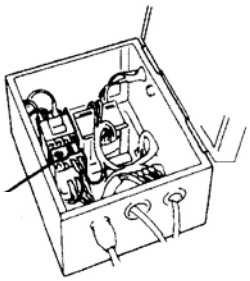


Air filter regulator

Features the function to reduce pressure of air supplied to the filter regulator to appropriate pressure levels (0.7 to 1.0 MPa) and the function to drain water in the air. Air pressure gauge shows the air pressure after depressurization.
Refer to “Inspecting Filter Regulator” on page 14.



5. Safety Devices

	Lowering stop hook	They are installed at each cylinder to prevent lift from falling in case of oil leaking and breakage of hydraulic hoses etc. However, please note that there is no lowering stop hook below approx. 500 mm from bottom.
	Fuse valve (Shutoff valves)	It is installed at each cylinder. It would shut off the oil flow in case sudden flow of oil from cylinder due to the breakage of hydraulic circuit etc.
	Relief valve	In case of below, it would work to prevent lift from break a. lifting heavier load than lift's capacity b. lift is reaching the top c. pressure in hydraulic line increases due to the trouble for any reason It is installed inside of gear pump.
	Thermal relay	It would sense the excessive electric current and shut off the circuit and protect electric components. It is installed at magnetic switch.

6. Pre-Operation Checks

6-1. Items for Pre-Operation Checks

This is a very important for preventing fall accident involving a vehicle and personal injury, by making routine work that involve the use of the lift safe. Perform the pre-operation checks before operation every day. Immediately stop use of the lift and make sure it is repaired and safety is verified before using when any abnormality is discovered.
Contact the lift supplier from whom the lift was purchased if any parts required for repairs and replacements.

Inspection item	Inspection method	Processing / reference page
Make sure that the air is supplied at appropriate pressure (the set pressure is 0.7 MPa).	Verify the pressure on the filter regulator.	Adjust the pressure to the appropriate value. Refer to Section 6-2, “Inspecting Filter Regulator”.
Verify drain of filter regulator.	Verify that no water is found inside.	Drain water. Refer to Section 6-2, “Inspecting Filter Regulator”.
Verify smooth raising and lowering.	Perform visual and auditory checks while performing the full stroke operation of the lift and arms, with no vehicle loaded.	Contact the lift supplier from whom the product was purchased if any abnormality is discovered.
Verify to ensure there are no oil leaks.	Perform visual check.	
Verify to ensure there is no abnormality (damage, deformation, scratch, etc.) with external appearance of the lift unit.	Perform visual check.	
Verify to ensure there are no air leaks.	Perform visual and auditory checks.	
Verify to ensure there is no abnormality with electrical system and that the unit operates well.	Perform visual and auditory checks.	
Verify to ensure there is no abnormal noise with the lift unit, motor or pump.	Perform visual and auditory checks.	
Verify to ensure that the lowering stop hooks are functioning properly.	Verify to ensure that the lowering stop hooks are engaged when the lift is not descending and that they are disengaged when the lift is being lowered.	
Verify to ensure there are no damages with the remote control switch and cabtire cable.	Verify to ensure that the unit operates as displayed on the remote control and also visually verify conditions for damages.	

6-2. Inspecting Filter Regulator

The regulator features the function to reduce pressure of air supplied to the filter regulator (0.7 to 1.0 MPa) to the appropriate level of 0.7 MPa and to drain water in the air. Air pressure gauge shows the air pressure after depressurization.

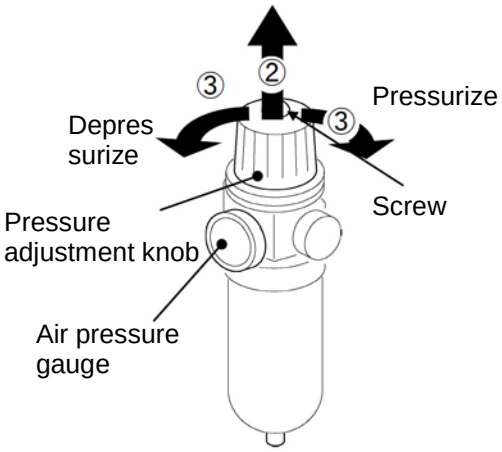
<Depressurizing method>

① Verify that the pressure of air supplied to the filter regulator is at least 0.7 MPa.

② Loosen the screw on top of the filter regulator.

③ Look at the air pressure gauge while turning the pressure adjustment knob to set the pressure to 0.7 MPa.

④ Tighten the screw on top of the filter regulator.

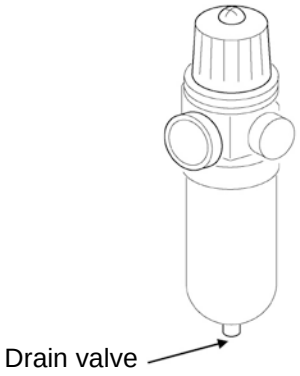


⚠ Caution

* The appropriate value of the pressure of air (primary side pressure) supplied to the filter regulator is between 0.7 and 1.0 MPa. The filter regulator may be damaged if the pressure is greater than 1.0 MPa.
* Always make sure that the air pressure gauge is pointing 0.7 MPa before operating lift. The lift may malfunction if the pressure is under 0.7 MPa. Furthermore, the Selex valve may be damaged if the pressure is over 0.7 MPa. Always set the pressure to 0.7 MPa.

<Drain method>

① Push up the draining valve.
Water sprays out with air.



⚠ Caution

Drain water must be drained from the filter regulator every day.
Accumulation of water can cause malfunction.

7. Operation Instruction

7-1. Preparation for Vehicle Entry

* Supported models: Light to ordinary passenger vehicles, recreational vehicles and small trucks (excluding long-body vehicles).

⚠ Caution

Supporters and swing arms may collide with the vehicle and may potentially damage the vehicle or the lift if the lift is not lowered to the lowest position with swing arms stored.

Lower the lift to the lowest position and store swing arms in arm supports. Remove any tools and parts that are in the vicinity of the lift or on path of entry for the vehicle. The frame attachment, furthermore, is protruded above the floor surface. Remove it if it gets in the way.

7-2. Vehicle Entry

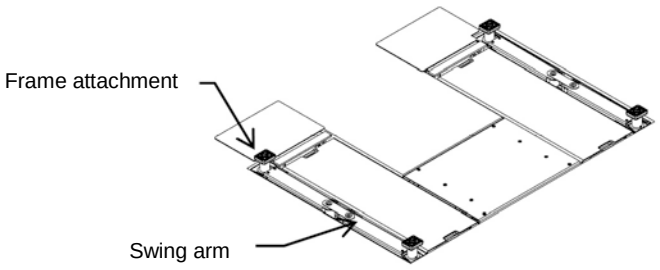
⚠ Warning

Set the center of gravity of the vehicle to within the range specified with yellow color on the supporter. The vehicle may potentially fall while the lift is raised or lowered, or due to vibration arising from operating lift, as well as from detaching and attaching parts.

Drive carefully the vehicle onto the center of the lift and stop the vehicle so that the center of gravity of the vehicle is within the range specified on the lateral surface of the supporter.

⚠ Caution

Drive the vehicle in carefully and do not start or stop the vehicle suddenly. Do not turn the steering wheel while the vehicle is on the swing arms or frame attachments.
Doing so may potentially lead to damage of the vehicle or the lift.



7-3. Set Up Lifting Point

⚠ Warning

* Securely set supporters on correct lifting points. Improper setting supporters can cause the supporters to become dislodged and the vehicle may potentially fall.
* The partial lifting only on front or back, as well as on left or right is strictly prohibited.

<Using sliding supporters>

Raise supporters slightly and adjust sliding supporters to align with lifting points of the vehicle. Manually pull out the sliding part to adjust. Set side sill blocks on supporters to align with lifting points.

<Using swing arms>

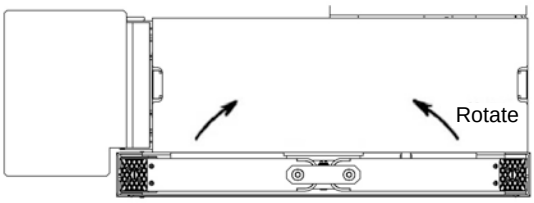
Raising swing arms

⚠ Caution

Raise swing arms only when the lift unit is at the lowest lowered position.

① Press the arm raising button (Up button) on the operation switch with the lift unit at the lowest position.

② Swing arms are raised and retained at that position.



⚠ Warning

* Always make sure that the rubber pads contact flat and stable locations. Lifting on slanted and other unstable locations can result in loss of balance and the vehicle may potentially fall.
* Adjust the height of supporters to evenly distribute the load among the four supporters. The supporter may become dislodged and the vehicle may potentially fall.
* If the arms are not raised even when the arm raising button is pressed, always press the arm lowering button first and then conduct verification work.

⚠ Caution

Spread swing arms as widely as possible when in use.

Rotate, extend and retract swing arms to align rubber pads with lifting points and adjust the height of each supporter so that the load is distributed evenly on each supporter.

7-4. Lifting Operation

⚠ Danger

Never stand under the vehicle while operating the lift.

⚠ Caution

* Do not lift a vehicle with people or cargo still on board.
* Do not operate the lift while looking elsewhere. Doing so can lead to a serious accident.
* Do not lift a vehicle that exceeds the maximum capacity of the lift. Doing so can lead to damage of the lift.

Supporters rise when the lift “Up” button on the operation switch is pressed.
Raise supporters and stop the lift once the rubber pads and side sill blocks (hereinafter referred to as “pads”) come into contact with the vehicle. Verify to ensure that pads are securely contacting correct lifting points.
If they are not at correct positions, perform adjustments.
If pads are on correctly, then raise the lift so that the tires are lifted about 20 mm off the floor and then shake the vehicle gently up and down to verify balance. If the balance is not good, move the vehicle as close as possible to the center of the mounts and perform the verification again. Do not lift the vehicle if the balance cannot be improved. Raise the vehicle to the vehicle servicing height if the vehicle is balanced well. Once the vehicle is raised to the top position, promptly stop the lifting operation.

7-5 During Work

⚠ Warning

* Do not shake the raised vehicle hard. The pads setting may become dislodged and the vehicle may potentially fall.
* Pay attention when removing or attaching heavy parts to prevent the vehicle falling. Balance may be lost and the vehicle may potentially fall.

7-6. Lowering Operation

⚠ Danger

Never stand under the vehicle while operating the lift.

⚠ Warning

* Lowering the lift with transmission jack, rod or the like for removing or installing parts still attached to the vehicle is prohibited. The supporter setting may become dislodged and the vehicle can potentially fall.
* Do not place a foot under a supporter. Foot may become trapped and result in serious injury.

⚠ Caution

* In the event the lift does not lower even when the lowering button on the operation switch is pressed, raise it once and then try lowering it again.
* Do not leave the lift with a vehicle lowered midway unattended for long periods of time. A vehicle left on the lift at a low position without engaging lowering stop hook may potentially cause the vehicle to be lowered and damaged.

Perform lowering operation while constantly verifying horizontal level of the vehicle.
Stop the lowering operation in an unlikely event the lift tilts and as a result also the vehicle, then carefully perform the lifting operation to bring the lift to the horizontal position and then try the lowering operation again.
If such incident occurs frequently, there may be malfunction. Contact the lift supplier for consultation.
The lift starts to lower when the lift lowering button on the operation switch is pressed. Stop the switch operation once the vehicle reaches the desired height for stopping.

7-7. Vehicle Exit

Exit the vehicle slowly only after lowering the supporter to the lowest position.

<Using sliding supporters>
Stop the vehicle once after wheels are off the supporters, then store the sliding part, then lower the lift to the lowest position.

⚠ Caution

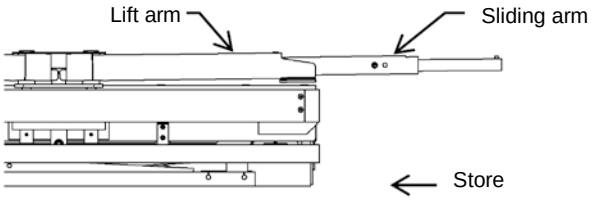
* Verify that the lift has been lowered to the lowest position. The supporters suspended midway may potentially lead to damage of the vehicle or the lift.
* Not having the sliding parts stored may potentially lead to damage of the vehicle or the lift.

<Using the swing arms>
Exit the vehicle after storing swing arms in the arm support.

⚠ Caution

* Once the vehicle servicing has been completed, store the slide arms all the way inside lift arms, then lower the lift to the lowest position. Lowering the lift to the lowest position while the slide arms are still extended out can cause the slide arms to come into contact with the floor and deform the arm pins.
* Arm lowering button can only be operated when the lift unit is at the lowest lowered position.

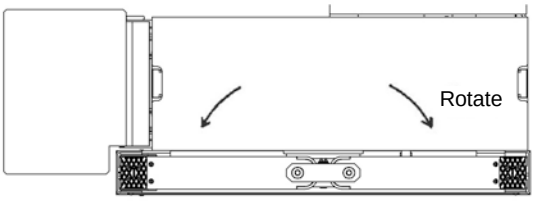
① Completely store the slide arms inside lift arms once the vehicle servicing is completed.



② Lower the lift to the lowest position.

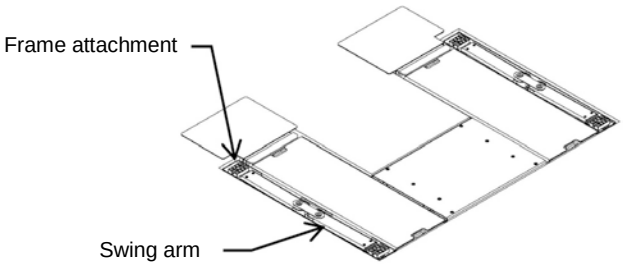
③ Rotate the swing arm and align it with the position where it can be stored inside the arm support (where it comes into contact with the stopper).

If a swing arm cannot be stored because of interference with an arm support or the like, lift the swing arm again and set it so that the swing arm can be stored inside the arm support, and then perform the lowering operation.



④ The frame attachment is protruded above the floor Level. Remove it if it gets in the way.

⑤ Drive the vehicle out slowly.



⚠ Caution

Drive the vehicle out carefully and do not start or stop the vehicle suddenly. Do not turn the steering wheel while the vehicle is on the swing arms or frame attachments. Doing so may potentially lead to damage of the vehicle or the lift.

7-8. Cleaning After Completion of Work

Once the vehicle servicing has been completed, wipe off oil and grease attached on supporter and inside the lift area to clean. In the event any abnormality is discovered on such occasion, consult the lift supplier immediately. Lower the lift to the lowest position and shut off the power supply (circuit breaker) for purpose of safety.
Drain the compressor also to ensure that the air supplied to the lift is dry and clean.

8. Regular Inspection

Regular inspection are essential inspection procedures to secure safety (preventing vehicle falling accidents and personal accidents) and to ensure the lift can be used for a long time, which are performed along with the pre-operation check.
Be sure to perform the regular inspection at least once each month, in addition to the pre-operation check that is performed every day, in order to ensure that the lift is used safely. In the event when even slightly abnormal condition arises during routine use of the lift, immediately suspend the use of the lift and make sure it is repaired properly and verify safety before using the lift.
Requesting the lift supplier where the lift was purchased for repairs on abnormality.

Inspected location	Inspection item	Synopsis of inspection	Referenced section
Lubricating location	Grease fittings	Lubricate each lubricating location	8-1
Inside pit	Drainage and foreign matter inside the pit.	Raise the lift unit and verify to ensure the pit is properly drained inside and there are no foreign articles.	8-2
Lowering stop hook	Operating conditions of lowering stop hook.	The lift must ascend while making clicking sounds when raised.	8-3
Air circuit	Couplings and air tubes.	Verify to ensure there are no cracks or air leaks.	
Control panel	Electrical components (magnet switch, relay, etc.).	Verify to ensure they are operating normally, that there are no damages or loose terminal connections.	
Bolts and nuts	Loosening.	Verify to ensure there is no loosening and tighten as needed.	
Lift unit	Rust conditions.	Verify to ensure there is no rust.	
Arms	Operation of arm stop. Thickness of arms.	Verify to ensure that arm stop operate when the sliding arm is fully extended and that the thickness of the arms is within standard range.	
Adjustable supporters	Operation of stoppers. Rattling.	Verify to ensure that stoppers are reliably operating when the pads are rotated and extended to the highest position and that the rattling range is within 2 mm when moved up and down while holding the supporter.	
Couplers, upper (Refer to “Lubricating Locations Diagram” on page 21)	Loosening of couplers, upper.	Verify to ensure there is no loosening and tighten as needed. * If the part is loose, either replace the part or tighten with screw locking glue and the like.	

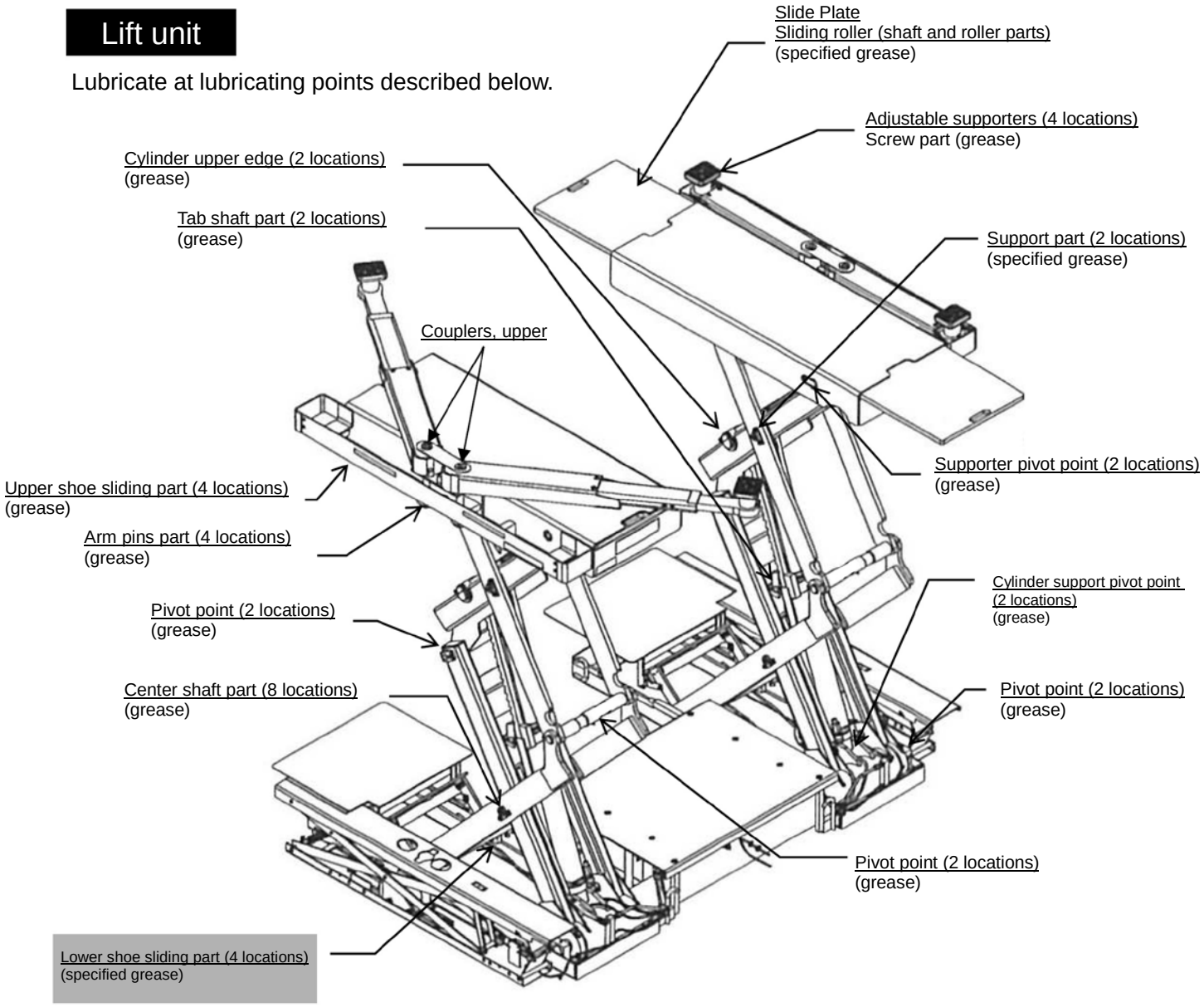
Notes for Using Safely

Have a qualified service personnel perform a periodical inspection once a year, in addition to the regular inspection described above.
Request the lift suppliers where the lift was purchased for periodical inspection performed.

8-1. Lubrication Points

Lift unit

Lubricate at lubricating points described below.



Use the grease described below on the lower shoe sliding part.

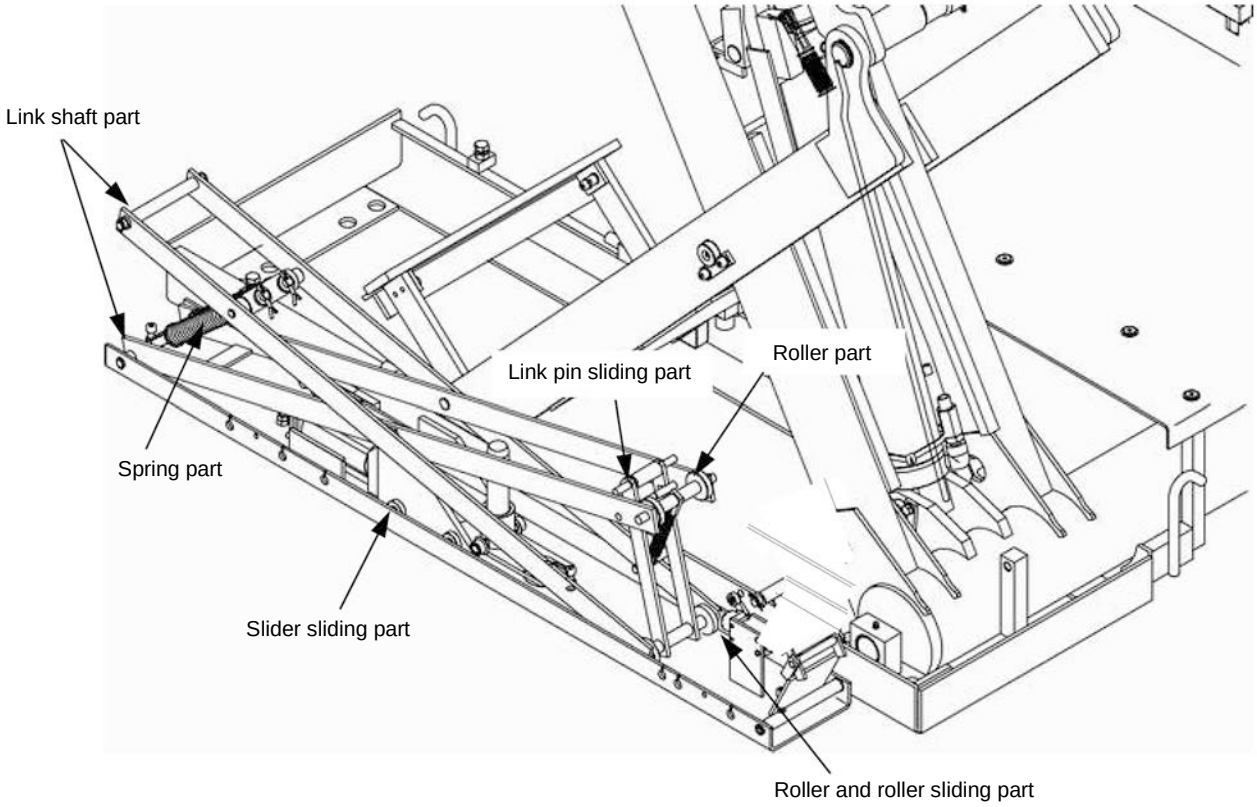
Specified grease: “Powerlite WR No. 1” manufactured by Kyodo Yushi.

* Contact the lift supplier where the lift was acquired, and inform the lift supplier of the product code described below to place an order.
[Product code: 39000576] Powerlite WR No. 1, 400 grams

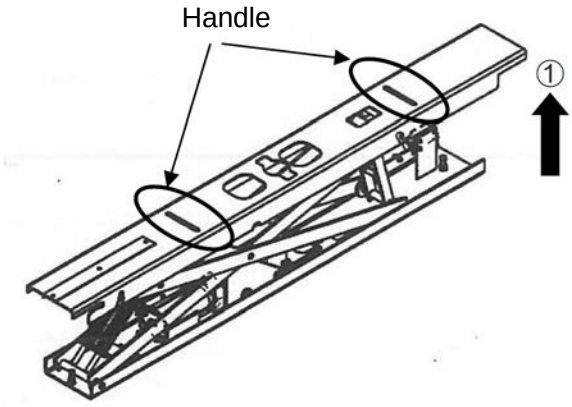
Use lithium grease on other lubricating points.

Pit cover

Lubricate at lubricating points described below.

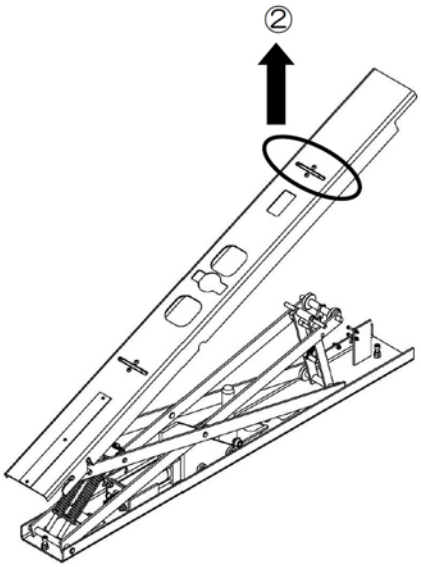


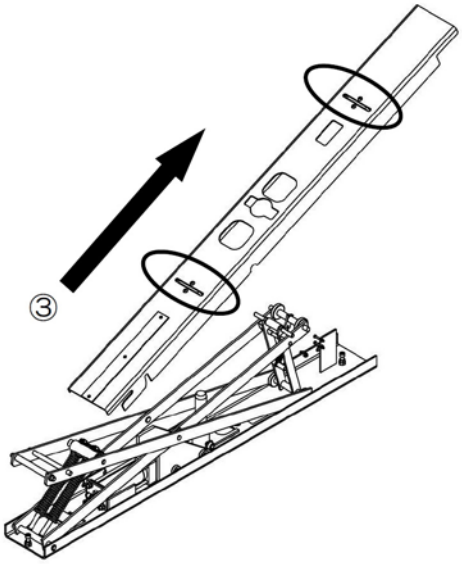
*Lubricate after the upper pit cover removed.



<Removing pit cover>

① Raise the lift by 1,000 mm.
② Lift the handle on the upper pit cover on one side.
③ Grab on the other handle and pull it out.



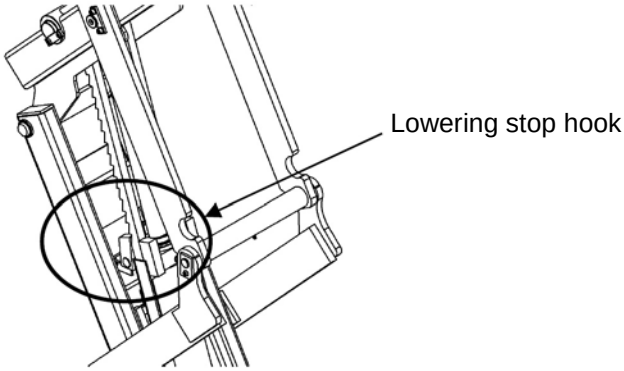


8-2. Inspecting Inside Pit

Verify the draining condition inside the pit and to ensure there is no foreign articles.

8-3. Inspecting Lowering Stop Device

Verify that the lowering stop hook in the illustrated portion make clicking sound while the lift is raised.



9. Trouble Shooting

Responsive actions for malfunctions that are relatively easy for users to perform are introduced here. If there are other types of malfunctions or questions, contact the lift supplier where the lift was purchased.

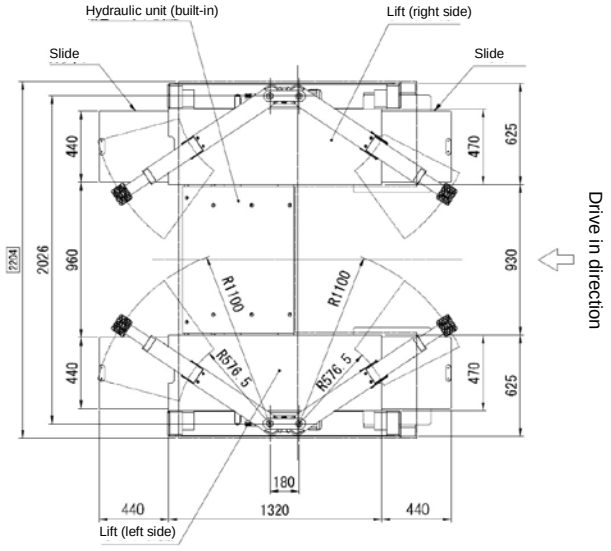
Symptom	Cause	Action
The lift cannot be raised (Motor does not turn) (Motor does turn)	○ Thermal relay of magnet switch is operating.	○ Investigate for the cause and press the reset button.
	○ Cable connection fault.	○ Recheck cable connection.
	○ Contact of a push-button switch is not conducting electricity.	○ Replace the push-button switch.
	○ Insufficient hydraulic oil.	○ Replenish hydraulic oil.
	○ Foreign matter is contacting the shoe under the lower part of the link.	○ Remove the foreign matter.
The lift cannot be lowered	○ A lowering stop hook is caught on the rack.	○ Raise the lift and then lower it again.
	○ Foreign matter is contacting the shoe under the lower part of the link.	○ Remove the foreign matter.
	○ The pressure of air is below 0.7 MPa.	○ Adjust the filter regulator or adjust the source pressure.
The lift can be raised but gradually lowers	○ Oil leak from piping and high-pressure hose.	○ Tighten.
The lift raising speed is slow	○ Clogging of oil filter.	○ Clean oil filter or replace oil.
Abnormal noise	○ Link shaft bearing is lack of lubricant.	○ Add lubricant.
	○ There is insufficient amount of hydraulic oil.	○ Replenish oil.
	○ The sliding part of a shoe is lack of lubricant.	○ Apply grease to the sliding part (apply specified grease only to the lower side of the shoe).
The lift cannot be raised or lowered	○ A fuse is blown.	○ Replace the fuse.
	○ The primary side power is not supplied.	○ Turn on the power supply.

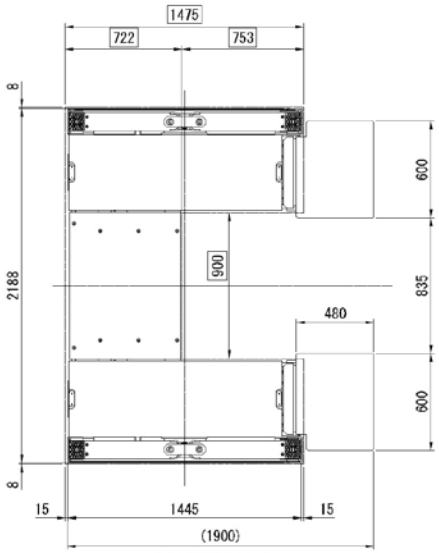
10.Specifications

Note that the specifications of the lift may be changed without prior notice.

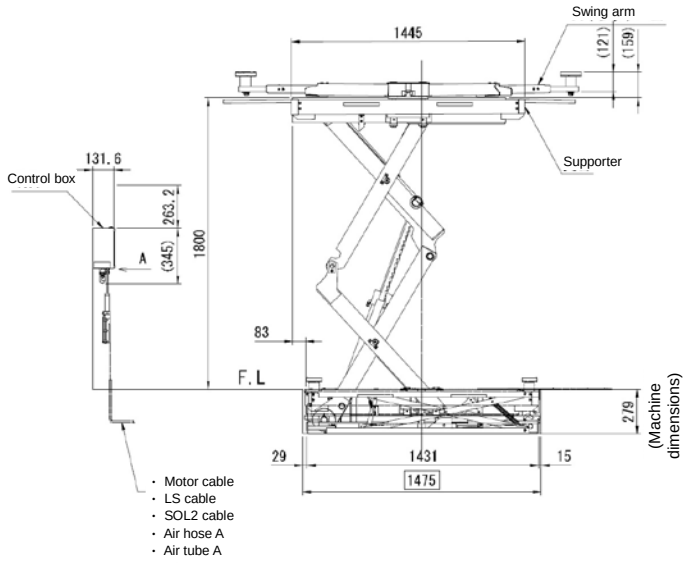
Specifications

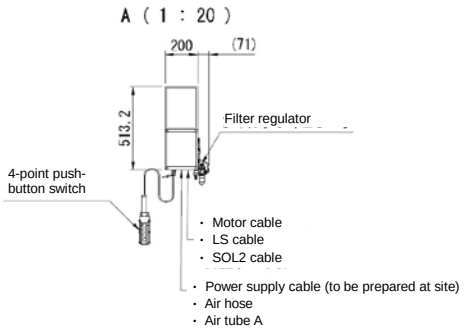
Model	BSC3200KUV
Capacity	3200Kg
Lifting height	1800mm
Rising speed (with 3,000 kg load)	Approx. 43 sec. (with 60Hz) and approx. 52 sec. (with 50Hz)
Lowering speed (with 3,000 kg load)	Approx. 40 Seconds
Machine weight	1350Kg
Power supply	3-Phase
Motor	2. 2 kw, 4P, 5 minutes rating
Driving method	Electro-hydraulic type
Operation method	Push-button switch
Operation switch voltage	DC24V
Oil	ISO Standard VG32
Total amount of oil	13L
Air pressure	0.7Mpa





Drawing when Lift is at Lowest Position

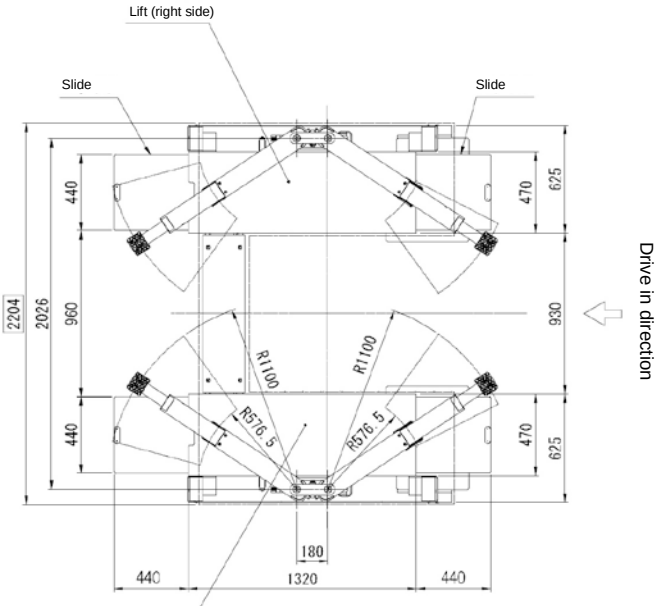


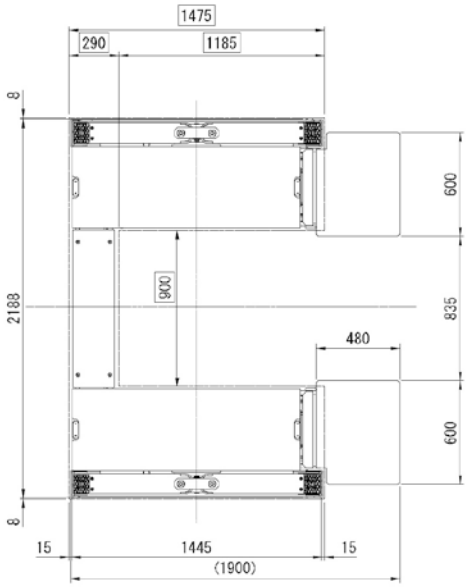


Note 1: The measurements shown inside the box (□) are the dimensions of the pit.

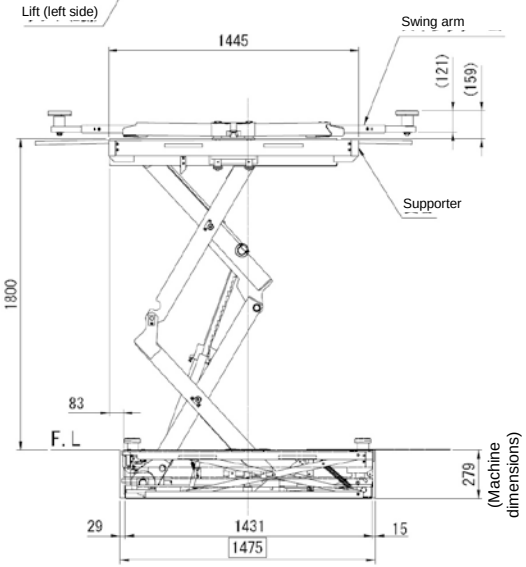
Specifications

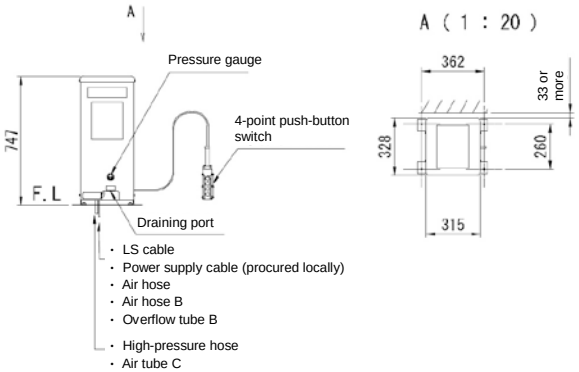
Model	BSC3200KV
Capacity	3200Kg
Lifting height	1800mm
Rising speed (with 3,000 kg load)	Approx. 43 sec. (with 60Hz) and approx. 52 sec. (with 50Hz)
Lowering speed (with 3,000 kg load)	Approx. 40 Seconds
Machine weight	1250Kg
Power supply	3-Phase
Motor	2. 2 kw, 4P, 5 minutes rating
Driving method	Electro-hydraulic type
Operation method	Push-button switch
Operation switch voltage	DC24V
Oil	ISO Standard VG32
Total hydraulic pressure	13L
Air pressure	0.7Mpa





Drawing when Lift is at Lowest Position

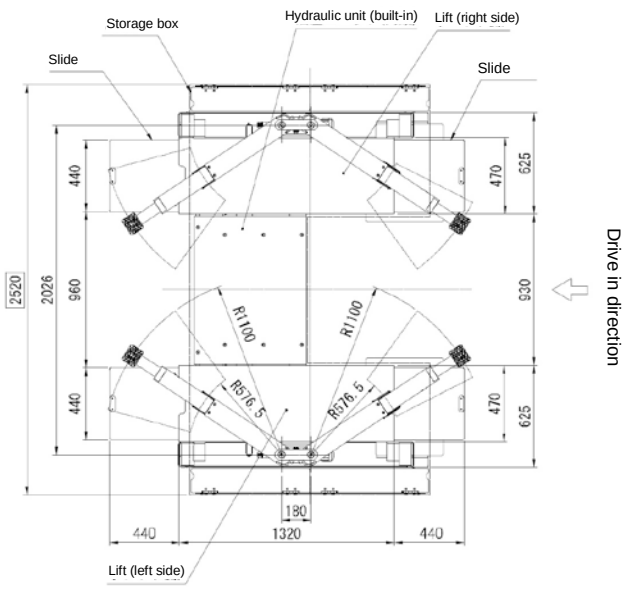


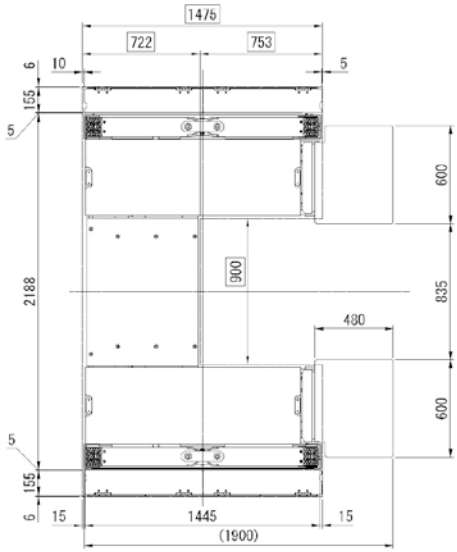


Note 1: The measurements shown inside the box (□) are the dimensions of the pit.

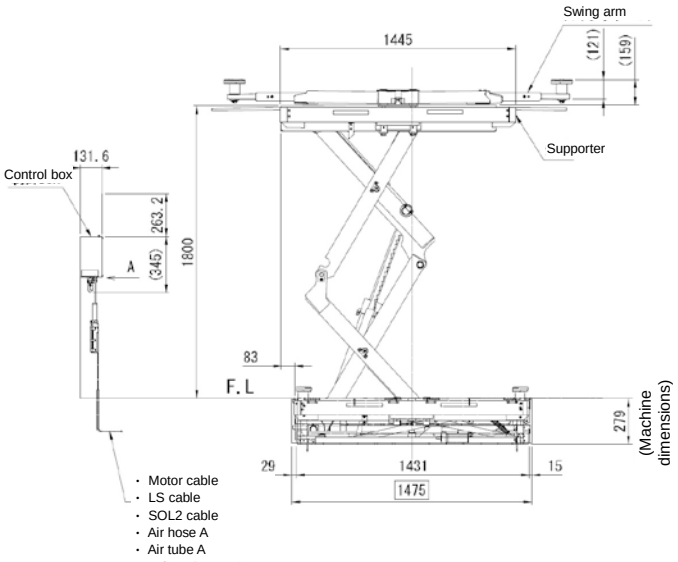
Specifications

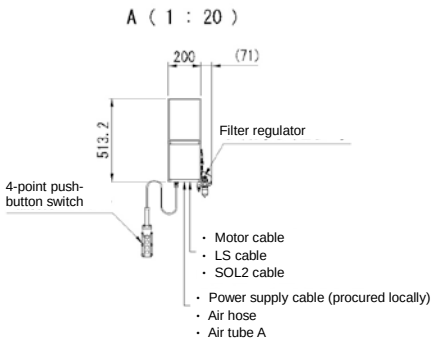
Model	BSC3200KUV (fitted with optional storage box)
Capacity	3200Kg
Lifting height	1800mm
Rising speed (with 3,000 kg load)	Approx. 43 sec. (with 60Hz) and approx. 52 sec. (with 50Hz)
Lowering speed (with 3,000 kg load)	Approx. 40 Seconds
Machine weight	1450Kg
Power supply	3-Phase
Motor	2. 2 kw, 4P, 5 minutes rating
Driving method	Electro-hydraulic type
Operation method	Push-button switch
Operating voltage	DC24V
Oil	ISO Standard VG32
Total hydraulic pressure	13L
Air pressure	0.7Mpa





Drawing when Lift is at Lowest Position

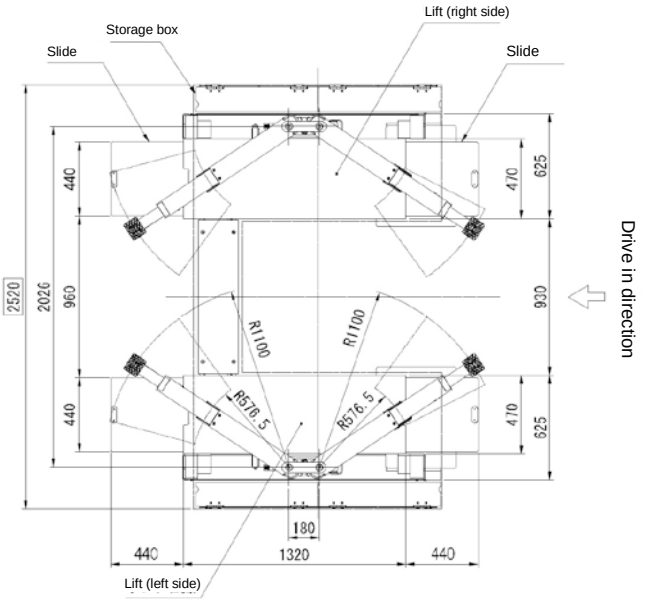


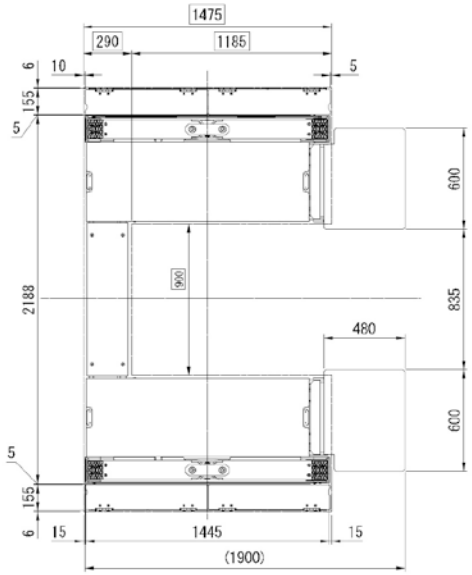


Note 1: The measurements shown inside the box (□) are the dimensions of the pit.

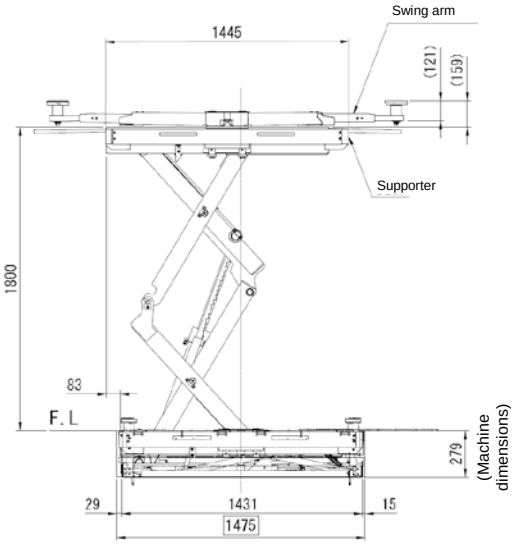
Specifications

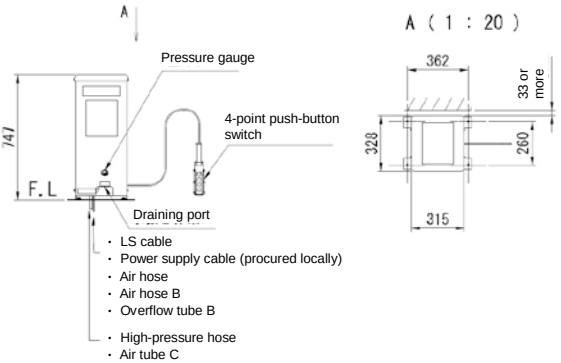
Model	BSC3200KV (fitted with optional storage box)
Capacity	3200Kg
Lifting height	1800mm
Rising speed (with 3,000 kg load)	Approx. 43 sec. (with 60Hz) and approx. 52 sec. (with 50Hz)
Lowering speed (with 3,000 kg load)	Approx. 40 Seconds
Machine weight	1350Kg
Power supply	3-Phase
Motor	2. 2 kw, 4P, 5 minutes rating
Driving method	Electro-hydraulic type
Operation method	Push-button switch
Operating voltage	DC24V
Oil	ISO Standard VG32
Total hydraulic pressure	13L
Air pressure	0.7Mpa





Drawing when Lift is at Lowest Position

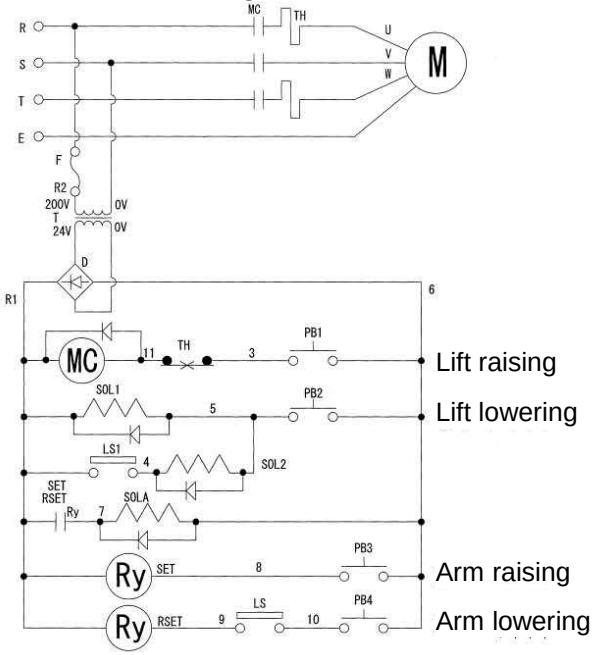




Note 1: The measurements shown inside the box (□) are the dimensions of the pit.

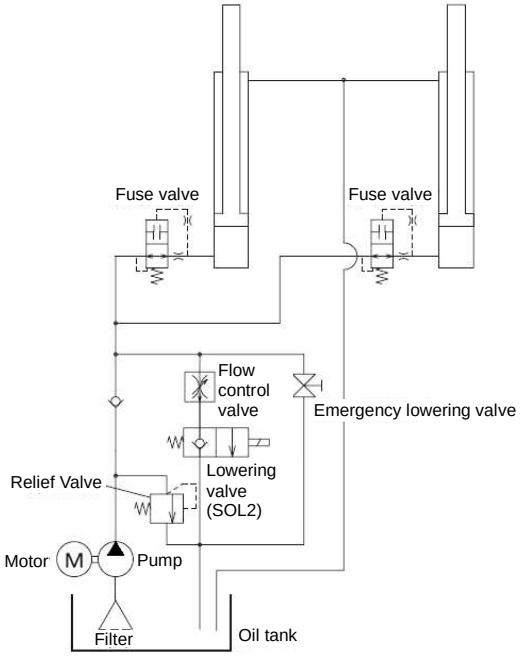
11.Circuit Diagram

Electric circuit diagram

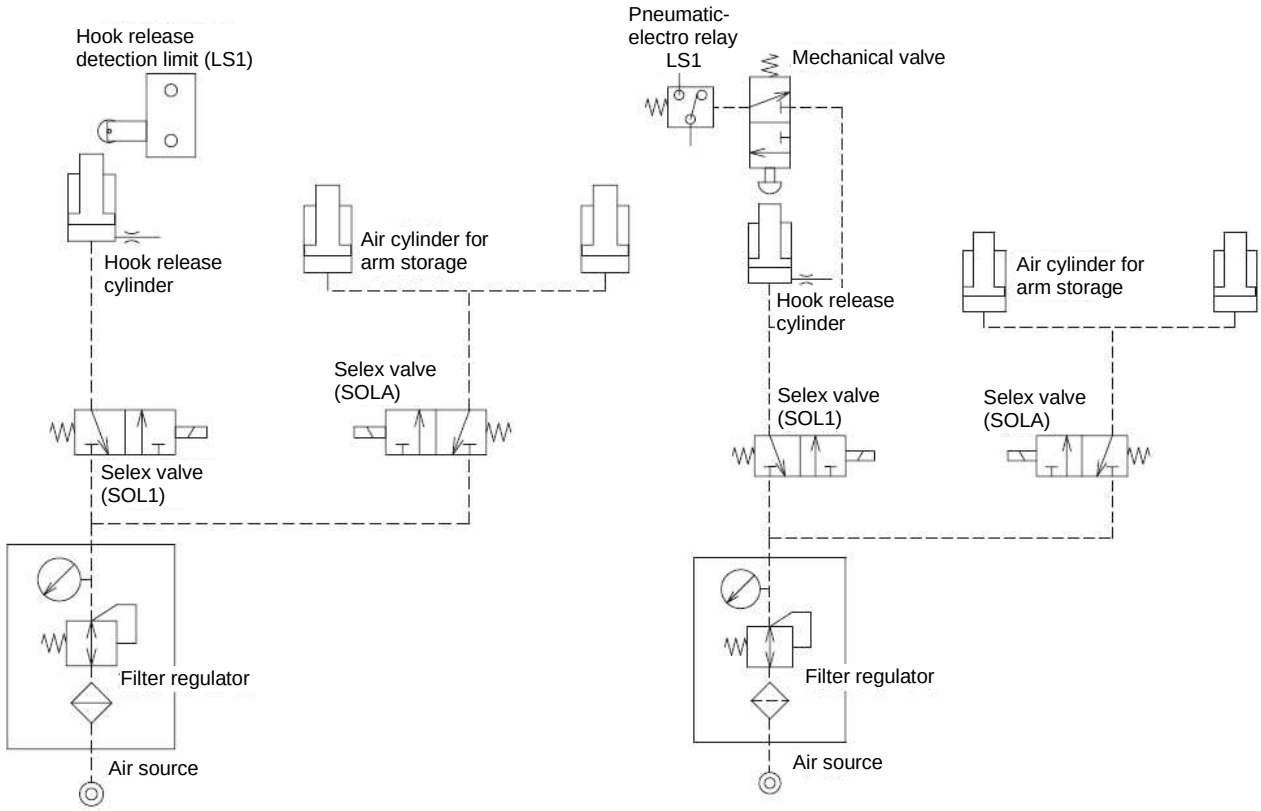


M	Motor
MC	Magnet switch
TH	Thermal relay
F	Fuse
T	Transformer
D	Rectifier
PB1	Lift raising button
PB2	Lift lowering button
PB3	Arm raising button
PB4	Arm lowering button
Ry	Latching relay
S0L1	Selex pneumatic valve (hook release)
SOLA	Selex pneumatic valve (arm raising)
SOL2	Lowering valve
LS1	Hook release detection LS
LS	Lift lower limit detection LS

Hydraulic circuit diagram



Air circuit diagram



BSC3200KUV BSC3200KV

12. Installation and Relocation

Contact the lift supplier from whom the lift was purchased for the installation (setup) and relocation of the lift.
Have the lift Supplier perform inspections when the lift is relocated.

13. Scrap

Separate ferrous materials, non-ferrous materials, plastics and hydraulic oils to dispose of the lift.
Scrap method, especially disposal of operation oil is obliged to be in conformity to the local law. Please scrap properly according to the law. If any question, contact lift supplier in advance.

14. Warranty

We warrant the products manufactured by Sugiyasu Corporation to be free from defects in workmanship and material for 1 year.
Our obligation under this warranty is limited to repair or replacement, at our option, of any parts or material which, within this warranty period, are found to our satisfaction to be detective.

The belows are not covered by the warranty.

1 The damage or trouble caused by the false operation, negligence of the maintenance and storage required.
2 The damage or trouble caused by the modification that affects the originally designed functions.
3 Any consumable parts that need to be replaced.
4 The damage or trouble caused by natural disaster such as fire, earthquake, flood etc.
5 The damage or trouble caused by not using the original manufacturer's parts.
6 The required information such as serial No. etc. would not be provided.
7 The damage or trouble caused by improper installation.

※ Any consumable parts such as rubber parts etc. are not covered under this warranty.

※ As this lift is not weatherproof, trouble caused by corrosion, rust, short circuit from water are not covered under this warranty.

How To Claim

Contact your lift supplier.

15. After Services

- Something is wrong ⇨ Check in accordance with this manual
- Something is still wrong ⇨ Contact your supplier for repair
- Repair under warranty period ⇨ Will be repaired in accordance with warranty rules
- Repair after warranty period ⇨ Contact your supplier
- Availability of spare parts ⇨ The spare parts is available for 8 years after discontinuing manufacturing

Contact your supplier for any information regarding to the after service.
When contacting your supplier, provide Model No., Serial No., purchase date and conditions of trouble.

For your records and future contact, fill out below.

Model No.	
Serial No.	
Purchase Date	
Supplier Name Address Tel. No.	
Installer Name Address Tel. No.	
Trouble Date and Conditions	Date:
	Date:
	Date:
	Date:
	Date:

Memo

Memo

Memo

Bishamon®

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