Bishamon® Compact Lift Table (Chibichan X)

Sep.2020

Operation and Service Manual

(3 Phasse/200V)	(1 Phasse/100V)	(1 Phasse/100V)	(Foot Pedal)
X050406A-B	X10B-B	X50SB-B	X20C
X50SA-B	X20B-B	X50B-B	X25C
X50A-B	X25B-B	X75B-B	X50C
X75A-B	X050406B-B	2X050510B-B	X75C
2X050510A-B			2X050510C

Read this manual carefully and understand completely before operating Lift Table. Keep filing this manual for future reference. If this copy is lost, please contact your local supplier for a replacement.

Explanation of Terms and Symbols

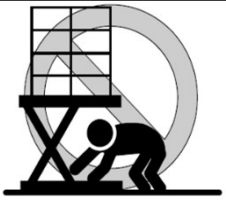
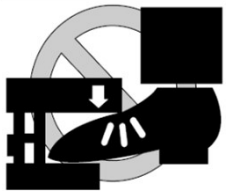
In this manual, 「Warning」, 「Caution」 are defined and specified as below. Notice of Warnings are very important for safe operations. As these are very Important to protect operators from accidents resulting in personal injury and death, and damage to property, so make sure to read thoroughly and understand fully before operation.

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

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

⚠ Warning !

◎ Hazard or unsafe practice which, if not avoided, may result in DEATH or SEVERE PERSONAL INJURY and PROPERTY DAMAGE.

			No Overload ! 
NEVER sit, stand or ride on table SEVERE PERSONAL INJURY or DEATH could result.	NEVER go under raised lift table until load is removed and scissor mechanism is securely blocked. SEVERE PERSONAL INJURY could result.	KEEP FEET CLEAR of under table that could result in SEVERE PERSONAL INJURY.	DO NOT overload lift table. ALWAYS stay within designated capacity and put load in center of table.
			
DO NOT double stack lift table.	DO NOT modify the lift table. DO NOT install large steel plate to expand table size, or install big size conveyor which could result in unbalanced load and may cause overturning lift table. SEVERE PERSONAL INJURY could result	DO NOT put hand near Scissor mechanism or other moving parts SEVERE PERSONAL INJURY could result.	

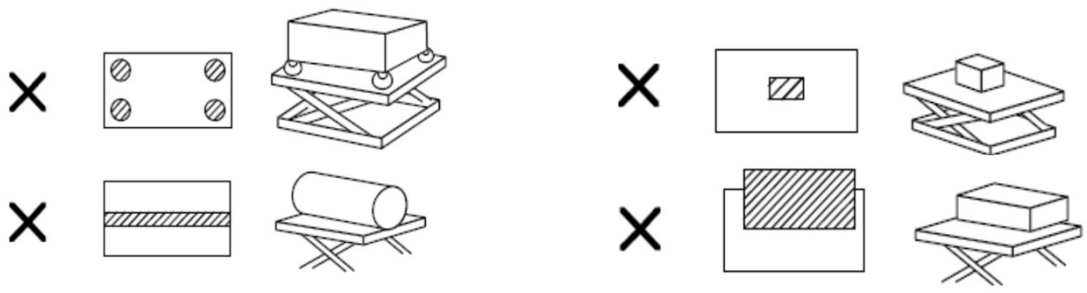
1. Warning and Cautions

⚠ Warning and Cautions !

◎ Hazard or unsafe practice which, if not avoided, may result in MINOR or MODERATE PERSONAL INJURY and PROPERTY DAMAGE.

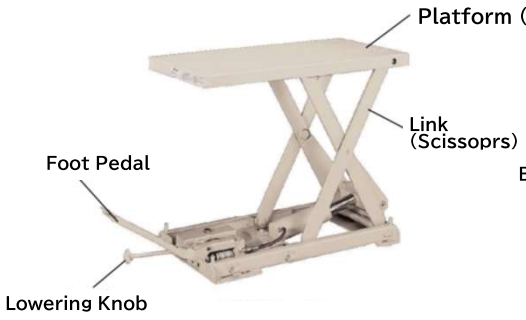
1. **READ THIS OPERATION MANUAL COMPLETELY BEFORE USING AND THOROUGHLY UNDERSTAND AND FOLLOW All SAFETY INSTRUCTIONS.** Wrongful use may result in accident.
2. This Lift Table (**Lift**) is designed for use with stable, uniformly distributed loads on a solid level floor. **DO NOT** use the Lift for any other purpose than its intended use.
3. Distribute the load evenly on the platform surface. **DO NOT** concentrate the load on the edge or the side of the platform unless the Lift is fully lowered position. Put the load evenly on more than 80% surface of the platform. Unbalanced load could damage the Lift and reduce the lift life.
4. This Lift is not designed for high frequency or high speed use applications.
5. This Lift Table shall be operated by **TRAINED** personnel only. **OPERATOR** shall read "Operation Manual" completely and thoroughly understand the controls and operation of this equipment BEFORE oeprating the Lift.
6. **DO NOT** use the lift with an unstable, unbalanced or loosely stacked load. Unbalanced loads may become unstable and fall. **SEVERE PERSONAL INJURY AND PROPERTY DAMAGE** could result.
7. Perform periodic inspection according to instructions of this manual.
8. **DO NOT** install the Lift on an unlevel or soft surface. The Lift base frame must be supported along its entire length. Failure to completely support base frame could result in damage to the Lift.
9. **DO NOT** overload the Lift. Always stay within designated capacity. Overloading the Lift could cause the load to suddenly fall. **SEVERE PERSONAL INJURY AND PROPERTY DAMAGE** could result.
10. **Keep** clear of all moving parts. **NEVER** put hands or feet in or near all moving parts of the Lift. **SEVERE PERSOAL INJURY could result.**
11. **NEVER** put feet or hands under the platform when raising or lowering the Lift. **SEVERE PERSONAL INJURY** could result.
12. **NEVER** go under the raised Lift platform until the load is removed and scissor mechanism is securely blocked in the open position. **SEVERE PERSONAL INJURY** could result.
13. **NEVER** place any load on the platform while the scissor mechanism is blocked in the open position.
14. **NEVER** sit, stand or ride on the Lift platform. **NEVER** allow another person to sit, stand or ride on the Lift platform. Moving components could cause loss of balance. **SEVERE PERSONAL INJURY** could result.
15. (For Electirc Operated Model)
    The Lift is provided with a remote hyd. power unit and has an electric line and hydraulic line connecting the power unit to the Lift. Use **CAUTION** not to trip over the lines and **DO NOT** run over the lines with mobile equipment. **SEVERE PERSONAL INJURY AND PROPERTY DAMAGE** could result.
16. **NEVER** leave the loaded Lift unattended unless the Lift is in the fully lowered position.
17. **ALWAYS** remove the load before servicing the Lift.
18. **ALWAYS** disconnect the power cable before servicing the Lift.
19. Any service done on the power unit should be performed by a qualified electrician.

※ Unbalanced Load means the concentrated load on localized or platform edge area as below.

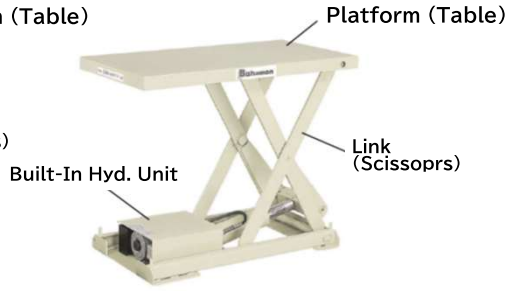


2. Name of Components

【 Foot Pedal Type 】

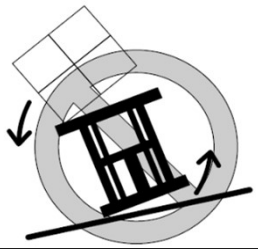


【 Electro Hyd. Type 】



Hyd. Power Unit
(Separately installed)

3. Installation of Lift Table

⚠ Warning !	
	
DO NOT install the Lift Table on an unlevel surface. Overturn of the Lift or damage to the Lift could result.	**DO NOT** hoist up platform of the Lift when moving location. Hoist up base frame for moving

⚠ Caution

1. Install the Lift so that there should be no gap between base and floor to avoid bent of base and frame.
2. Electric power cable should be less than 10m and more than 2 square mm cable should be used.
3. Temperature of installation site should be over 0℃ but less than 30℃
4. The Lift is not water proof nor for outside use model. Install inside building.
5. The Lift is not designed for the use with powder dust environment.

1. Make sure the installation floor is flat, and can bear the Lift weight and max load.
2. Make sure there is no gap between base and floor. If there is gap, Lift base could be bent and platform (table) could be tilted. If there is gap, fill the gap with shims etc.
3. If motor runs but Lift does not rise, there is possibility of reverse rotating of motor. If so, replace R with T. (Electro Hyd. Type)

4. Pre-Operation Checks

Perform the Pre-Operation checks before operating everyday.

⚠Caution !

If it is necessary to go under the raised Lift plaform for repair or servicing the Lift, make sure to remove the load off the lift table, and the scissor mechanism is securely blocked in the open position.

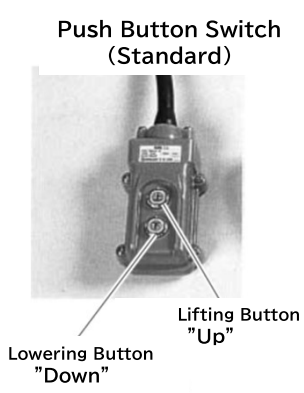
1. Any damage, distortion or crack in the Lift frame ?
2. Any obstacles inside the Lift ?
3. Does platform rise to the max height as per specification ?
4. Any oil leak from hydraulic line, cylinder or pump unit ?
5. Any abnormality in electirc circuit ? Is operation smooth ?
6. Any abnormal wear in sliding portion ?
7. Any abnormal noise from Lift unit, Motor or pump ?
8. Fastening of bolts and nuts
9. Is there any dirt or obstacles at the driving portions of rollers ?

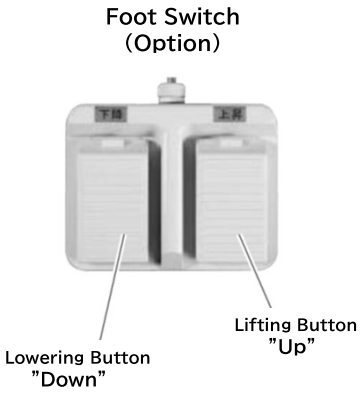
⚠Caution !

If dirt or obstacles etc. at driving portions are built up (piled up) and obstructing the driving of the rollers, damage to the Lift unit could result.

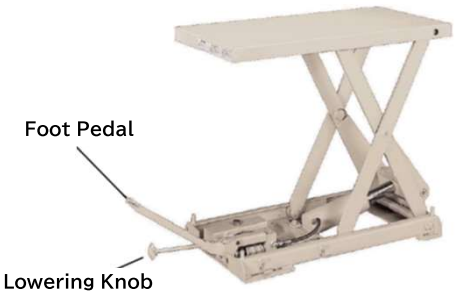
5. Operation

【 Electro Hyd. Type 】





【 Foot Pedal Type 】



The Lift can be lifted and lowered by Push Button Switch (or by Foot Switch) , or by Foot Pedal

⚠Warning !

Never put hands or feet in or near scissor mechanism and all moving part of the Lift. SEVERE PERSONAL INJURY could result.

5-1 Lifting Operation of the Lift

【 Electro Hyd. Type 】

Press the "Up" push button, or depress the foot pedal marked "Up" and raise the platform to a convenient working height. The Lift does not stop when platform reach the max height. Stop operating the Lift when platform reached max height.

【 Foot Pedal Type 】

Rotate Lowering Knob clockwise to close valve, and push down Foot Pedal to riase lift.

⚠Caution !

- **Platform is supported by hydraulic and lowers slightly (drift) as natural lowering.**
- **DO NOT continue to operate the pump if a squealing noise is heard coming from pump.**

5-2 Lowering Operation of the Lift

⚠Warning !

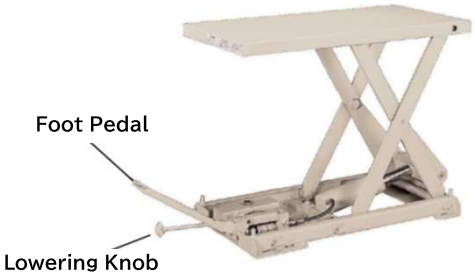
Never put hands or feet under the platform when raising or lowering the Lift.
SEVERE PERSONAL INJURY could result.

【 Electro Hyd. Type 】

Push Button Switch
(Standard)

Foot Switch
(Option)

【 Foot Pedal Type 】



【 Electro Hyd. Type 】

Press the **"Down"** push button, or depress the foot pedal marked **"Down"** and lower the platform to a convenient working height. The Lift does not stop when platform reach the floor. Stop operating the Lift when platform reached floor.

【 Foot Pedal Type 】

Rotate Lowering Knob counter-clockwise to lower the lift table. Lowering speed can be adjusted by fluctuation. Close Lowering Knob at desired height or at the bottom.

Explanation

- **If "Up" button and "Down" button are pressed at same time, first pressed takes priority.**
- **If "Up" and "Down" Foot Switch are deressed at same time, "Up" pedal switch takes priority.**

5-3 Loading / Unloading the Lift Platform

⚠Warning !

- **DO NOT overload the lift table. Always stay within the designated capacity ratings.**
- **DO NOT concentrate the load at one point on the pallet or platform. Always uniformly distribute each layer of load over the supporting surface.**
- **DO NOT use the lift table with an unstable, unbalanced or loosely stacked load.**
- **DO NOT modify lift table such as enlarging platform, installing big size conveyor etc.**

  ⇒ Overturn of lift table and SEVERE PERSONAL INJURY could result.

1. Check the load or component weight to ensure the total load does not exceed the capacity of the Lift. Refer to the capacity label on the Lift platform.
2. Uniformly distribute the load over more than 80% surface of the platform or supporting surface and ensure the load is tightly stacked.
3. DO NOT drop the load on the platform with impact.

5-4 Recommended Cycle Time (Interval) for Electric Hyd. Type

What is Cycle Time (Interval) ? :

The time between beginning of raising lift table and the next raising operation.

It is recommended more than 3 minutes cycle time for 200V unit, and
more than 10 minutes cycle time for 100V unit

Chibichan X Series do not use continuous rating motor. Follow the recommended Cycle Time (Interval) before restarting.

6. Regular Inspection and Maintenance

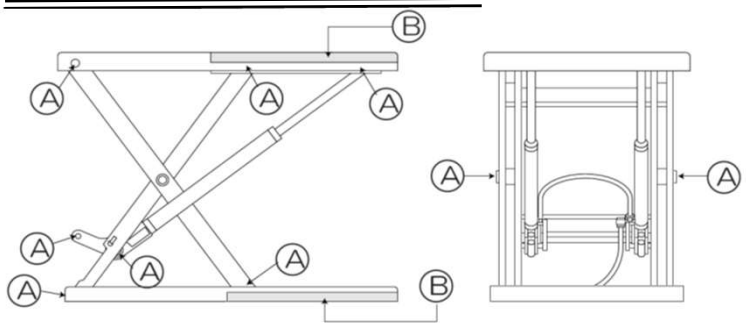
⚠ Warning !

If it is necessary to go under the raised Lift platform for inspection or servicing the Lift, make sure to remove the load and the scissor mechanism is securely blocked in the open position.

Be sure to perform the regular inspection at least once a month in addition to pre-operation check which is performed everyday in order to ensure that Lift can be used safely. All service should be performed by a qualified service person who has an understanding of lift equipment and hydraulic diagrams. This person should be thoroughly familiar with the operation and use of this type of equipment. Or it is recommended to ask the lift supplier to perform the services.

Inspection Spot	Inspection Point	Inspection Period
Lubrication	Lubricate the designated points	Monthly
Replace Oil	Replace all oil in the oil tank	3 months after installation then every year
Natural Lowering	Check natural lowering with fully loaded (should be less than 0.2mm/minute)	Every 6 months
Damage on the Lift	Check wear or distortion through Lift unit (Check welding especially)	Every 6 months
Shaft and Bearing Device of Lift unit	Check the wear of Shaft and Bearing Device of Lift unit	Every 6 months
Hyd. Hose	Check wear and damage from twist etc. It is recommended to replace hyd. Hose every 2 years as hyd. hose wear from stress in lifting and lowering.	Every 2 years

6-1 Lubricating Points



Ⓐ Inject grease to grease fittings

Ⓑ Apply grease

※ Use lithium grease

6-2 Hydraulic Oil to be used and Required Oil Volume

ISO VG32

Model	Oil Volume
X050406A/B X50A/B X75A/B 2X050510A/B X50SA/SB	0.8 L
X10B X20B X25B	0.5L
X20C X25C X50C X75C 2X050510C	1.0 L

7. Adjustment of Lowering Speed

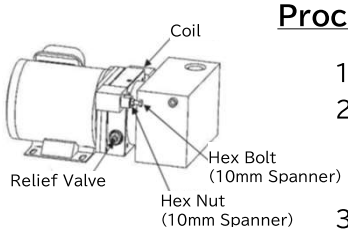
⚠Warning !

- **Lowering Speed is already adjusted and set at factory with specified load. It is not recommended to change the lowering speed faster which could be danger.**
- **Changing lowering speed without load could result in faster speed when loaded and could be danger.**
- **DO NOT adjust Relief Valve for safe use. If nut is loosened, oil could be leaking.**

Lowering speed can be adjusted through following procedure. Be noted that lowering speed could be varied depending on the temperature (The colder, the slower).

Model

X50A/B
X75A/B
X50SA/SB
X151406A/B
2X050510A/B

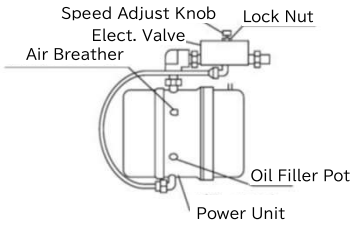


Procedure

1. Unfasten Hex Nut with 10mm spanner
2. Rotate Hex Bolt with 10mm spanner to adjust speed
   - Clockwise → Speed become faster
   - Counterclockwise → Speed become slower
3. Hold Hex Bolt with 10mm spanner, and fasten Hex Nut with 10mm spanner.

Model

X10B
X20B
X25B



1. Put load on the table and lift up to max height.
2. Loosen Lock Nut under the Electro Valve, and then adjust speed by rotating Speed Adjust Knob.
   - Clockwise → Speed become slower
   - Counterclockwise → Speed become faster

※ Be noted that Speed Adjust Knob could come off if knob is loosend too much.

8. Specifications

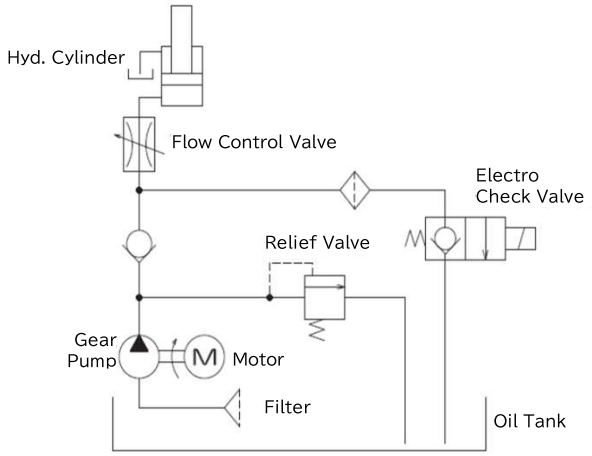
Model No.	Capacity	Vertical Travel	Table Size (mm)		Table Height (mm)		Motor	Rising Speed (Seconds)		Machine Weight(Kg)		Power Unit
					Min. Height	Max Height						
	(Kg)	(mm)	Width	Length			(KW)	50Hz	60Hz	Lift Unit	Power Unit	
3Ph/200V (380~415V)												
X050406A-B	500	390	460	650	140	530	0.375KW	14	12	54	28	Separate
X50SA-B		630			210	840		22	18	83	28	
X50A-B		650	518	1,010	150	800		20	16	126	N/A	Built-In
X75A-B	750							28	23	127		
2X050510A-B	500	1,170			235	1,405		29	24	142		
1Ph/100V (115V)												
X10B-B	100	400	500	650	131	531	0.2KW	12	10	63	N/A	Built-In
X20B-B	200							21	17	66		
X25B-B	250	565		813	150	715		34	28	82		Separate
X050406B-B	500	390	460	650	140	530	0.4KW	13	11	58	28	
X50SB-B		630			210	840		21	17	83	28	
X50B-B		650	518	1,010	150	800		19	15	138	N/A	Built-In
X75B-B	750							27	23	139		
2X050510B-B	500	1,170			235	1,405		27	23	145		
Foot Pedal												
X20C	200	400	500	650	131	531	Foot Pedal			55	N/A	Built-In
X25C	250	565		813	150	715				71		
X50C	500	650	518	1,010		800				115		
X75C	750									116		
2X050510C	500	1,170			235	1,405				128		

Note : X50SA-B、X50SB-B、2X050510A-B、2X050510B-B are double scissors models.

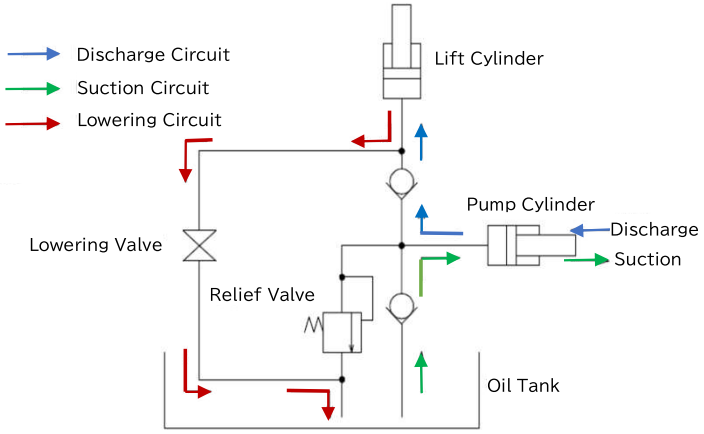
9. Circuit Diagram

【 Hydraulic Circuit 】

Electric Operated Type

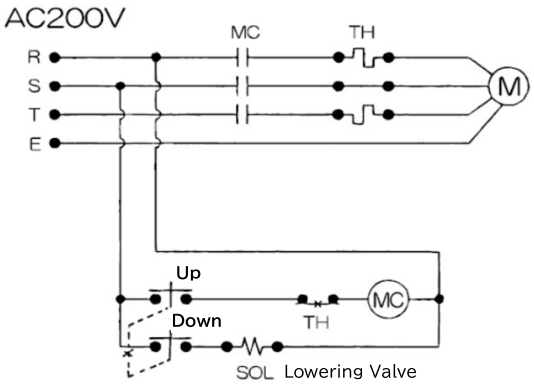
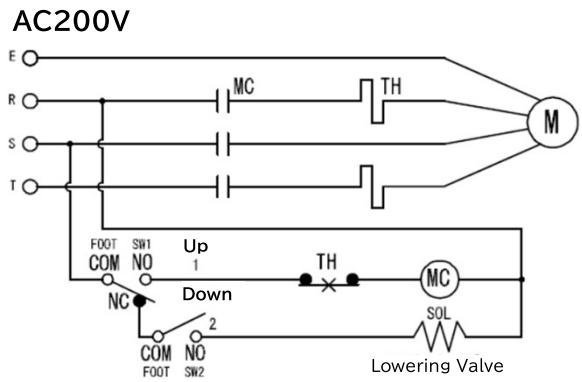


Foot Pedal Type

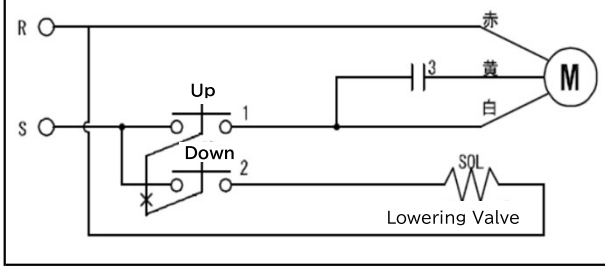
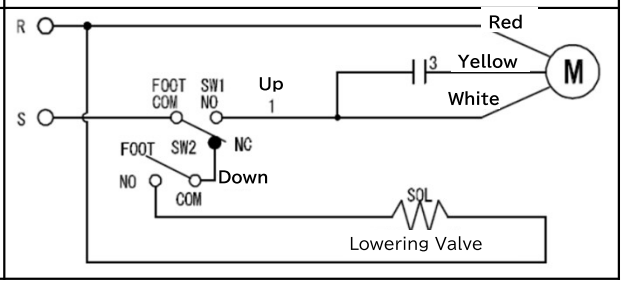


【 Electric Circuit 】

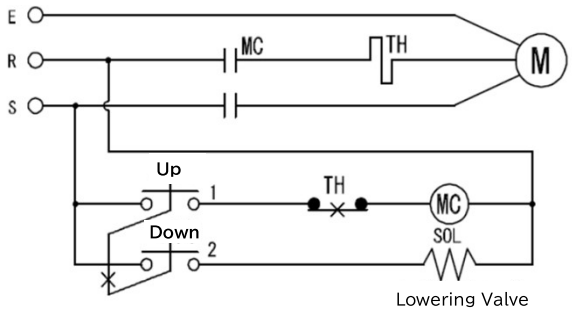
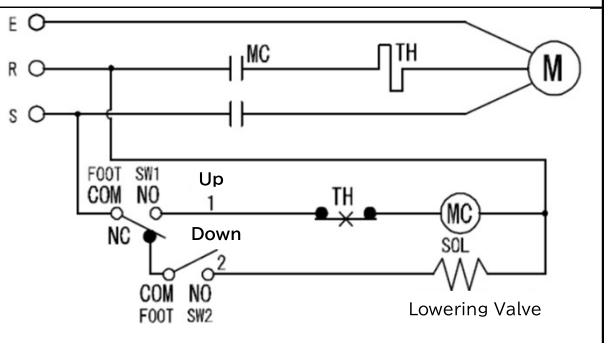
Model X50A、X75A、X50SA、X050406A、2X050510A

Push Button Switch	Foot Pedal Switch (Option)
	

Model X10B、X20B、X25B (1PH/100V)

Push Button Switch	Foot Pedal Switch (Option)
	

Model X50B、X75B、X050406B、2X050510B (1PH/100V)

Push Button Switch	Foot Pedal Switch (Option)
	

10. Disposal

When disposing of this Lift, dispose of the metal, non-metal, plastic, and hydraulic oil components separately.
There are regulations for disposing of the hydraulic oil, so make sure to sourt and follow the local rules.
If you have any questions regarding disposal, please check with your supplier of the Lift.

11. Troubleshooting

The below chart show how to deal with relatively minor malfunctions. For other further issues, please contact your supplier of this Lift Table.

Symptoms of malfunction	Type	Possible Cause		Action
DOES NOT rise at all without load	AB	Power Unit	· Malfunction of Power Unit	→ Replace Power Unit
	ABC	Hyd. Oil	· Lack of hyd. oil	→ Fill the oil
	C	Valve	· Lowering Valve is open	→ Close Lowering Valve
Lift Table rise without load but DOES NOT rise with load (There is Natural Lowering)	AB	Power Unit, or Relief Valve	· Malfunction of Power Unit, or leak from Relief Valve	→ Replace Power Unit, or → adjust Relief Valve
	AB	Elec. Lowering Valve	· Contamination in valve	→ Disassemble and clean up valve
	ABC	Lift Piston	· Wear of U Packing of Lift Piston	→ Replace U Packing
	C	Lowering Valve	· Lowering Valve is not closed	→ Close Lowering Valve completely
		Lowering Valve	· Seating failure of Lowering Valve	→ Disassemble and clean up valve
		Steel Ball	· Seating failure of Steel Ball	→ Replace Steel Ball
Oil Leak	AB	Lift Cylinder Piping	· Wear of seals · Loose piping	→ Replace seals → Tighten the piping
	C	Lowering Valve	· Wear of O Ring	→ Replace O Ring
		Pump Piston	· Failure of Dust Seal	→ Replace Dust Seal
Noise during rising	ABC	Suction Filter	· Suction Filter is clogged · Lack of Oil, or oil is not clean	→ Clean up Suction Filter, or → Replace oil

12. Product Warranty Conditions

Warranty

Should the unit malfunction within the warranty period (Within one (1) year of purchase) when it has been operated in accordance with the user manual and the warning labels on the unit, we will adjust the defective component, repair it, or send a replacement part free of charge. However, this does not apply in the case of secondary damage or any damage to which any of the following apply :

(1) Damage or injury resulting from incorrect operation, improper inspection, improper storage, or any other type of negligence
(2) Damage or injuries resulting from changes (modifications) that negatively impact the product's operation mechanism
(3) Consumable parts that are damaged and need to be replaced
(4) Damage or injury resulting from fires, earthquakes, wind, floods, or other natural disasters or external factors
(5) Problem resulting from specified parts not being used
(6) Error in the warranty claim process (Ex: failure to indicate Model or Serial No. etc.)
(7) Damage or injury resulting from installation
(8) Repairs performed not by our company or not by our authorized dealer
(9) Damage confirmed to be the result of overuse, user error, or accident

Furthermore, all rubber components and other naturally degradable products used in this products and its its accessories, as well as all consumable products, fall outside the scope of this warranty.

This lift is not waterproof, so rust, corrosion, short citcuits, and other damage caused by water is not covered under warranty.

How to Claim Warranty

If you decide to file claim for this product based on the above, please contact your supplier.
The supplier will carry out the necessary procedures. In addition, we can not decide whether or not any particular situation falls within the scope of this warranty.

13. After Sales Service

·Product does not work properly	→	Review the manual and try to find solution
·Product still does not work properly	→	Contact your supplier and request repairs
·Repairs within the warranty period	→	The warranty is valid one year from the date of purchase. We will service your product in accordance with warranty conditions.
·Repairs out of warranty period	→	Consult with your supplier
·Availability of Spare Parts	→	The spare parts are available for 8 years after discontinuing manufacturing

Contact your Lift supplier for any information regarding after service.
When contacting your Lift supplier, provide following information.

- **Model No.**
- **Serial No.**
- **Purchase Date**
- **Conditions of trouble**

Record the above information in the table below for future inquiries.

Type	
Serial No.	
Purchase Date	
Lift Supplier	
Installer	
Trouble Date and conditions	Date :
	Date :
	Date :
	Date :

Bishamon

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