HYDRAULIC TWO-POST LIFT BASEPLATE TYPE
redats L-200F

ORIGINAL USERS' MANUAL
version A.1.1 2019

Be sure to read this manual thoroughly before you start working with the lift

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1. Important safety remarks

1.1 Important remarks

The installation must be done by an authorized service person, as well as regular maintenance. The seller cannot be held liable for any damage caused by improper installation, exceeding the lift's capacity, incorrect ground preparation, using the lift for purposes different than described in this manual or failing to follow the safety requirements. The lift was designed for working on cars the weight of which does not exceed its capacity. Use it only for the intended purpose - it is forbidden to use it for other jobs. Follow the information on capacity shown on the labels on the unit.
Before you start working with the lift be sure to read the manual thoroughly - to avoid damage or unfortunate accidents. Never modify the lift's control panel or any other systems without the seller's advice. Only certified personnel can install the lift on site. Be sure to check the lift before every use and undergo regular check-ups. A complete users' manual should be kept easily available near the lift. All the installation manuals are just a suggestion and help. Check the local law regarding the permission to operate the lift.

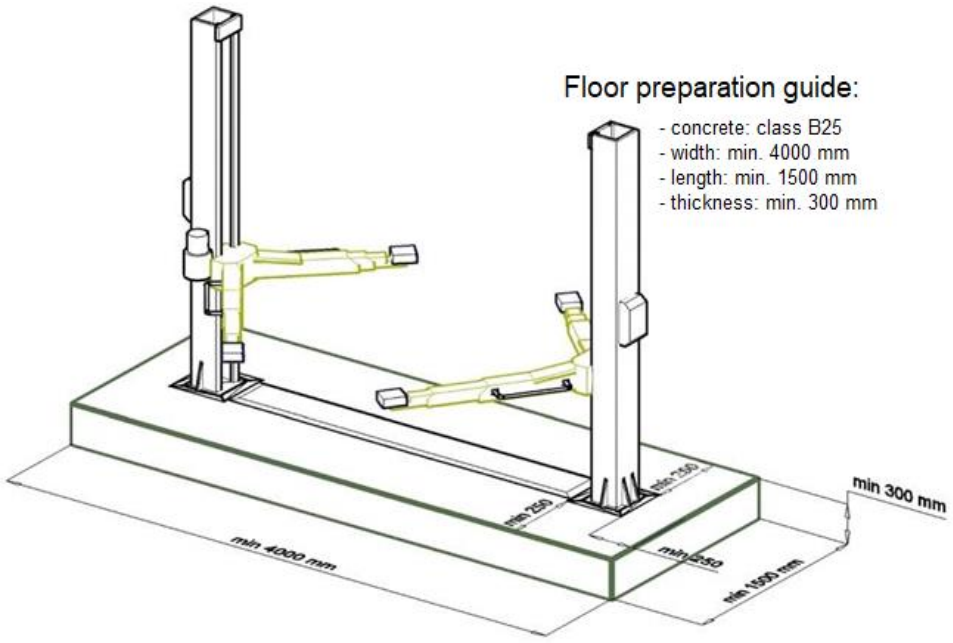
Caution!

In case the lift breaks down, lock the safety pawls. Keep them locked and never release them. Contact the service when you are certain that the lift is properly secured.

1.2 Floor preparation and working conditions

See the requirements regarding the working conditions and floor preparation.
Before you agree upon the installation date, be sure that the:

1. **Floor:**
   - is made of B25 concrete (or better)
   - has the dimensions: **400cm x 150cm, 30cm depth** (20cm – with frame lifts)
   - has no reinforcement on the depth of **30cm**
   - is even
   - has been cured for 28 days minimum
2. **Installation spot** – working conditions. A garage or any other spot under a roof that meets the following requirements:
   - temperature span: **−5℃ ~ +40℃**
   - humidity: temperature +30℃, relative humidity **≤80%**
3. **Lift location** on the day of installation:
   - It should be in the place you are going to use it at.



1.3 Certified personnel

- The lift should be operated only by employees who have undergone proper training.
- Power supply should be established by a certified electrician.
- Unauthorized personnel should never be close the lifting parts.

1.4 Safety remarks:

- Never put the lift on an asphalt surface
- Before you start working with the lift, read this manual thoroughly, paying special attention to safety remarks.
- The lift is for indoor use only.
- Keep your hands and feet away from the moving parts. Keep your legs clear of the moving parts, while they are moving (especially lowering).
- Never wear any loose clothes - they could be caught by the lift's moving parts.
- Keep the area around the lift clear - to avoid potential danger.
- The lift has been designed for raising vehicles all along. The vehicle's weight should not exceed the lift's recommended capacity.
- Check if the safety pawls are engaged before you start working under the vehicle.
- While raising the vehicle, make sure that the lift's pads touch the vehicle's lifting points. Make sure that the vehicle is stable and there's no risk of its' falling down.
- Inspect the synchronization and parts responsible for the safety of the moving elements. Follow all the maintenance instructions - if you find any problems or missing parts, contact your dealer.
- When you are done working, lower the lift to the lowest position and disconnect from power.
- Do not make modifications to the unit.
- Use a 10A fuse in the 230V circuit, 50 m from the unit.
- If you plan to keep the unit unused for a long time, do the following:
    - o disconnect it from power,
    - o remove oil from the reservoir,
    - o grease the moving parts (lubricating oil).

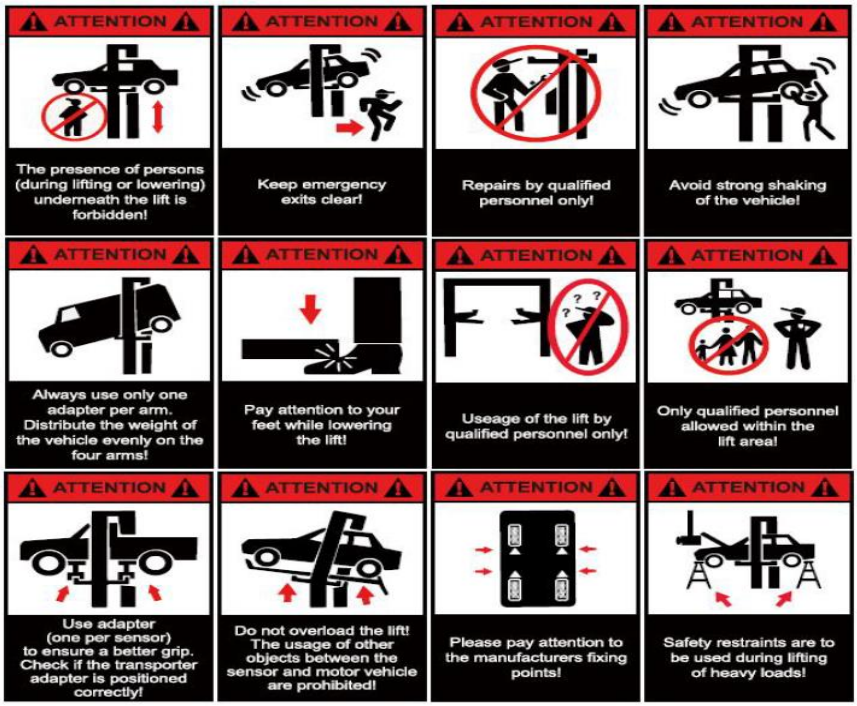
Caution: Used oil should be disposed of according to the local law.

1.5 Training

- The lift can be used by trained operators who have undergone proper training and read the instruction manual thoroughly.

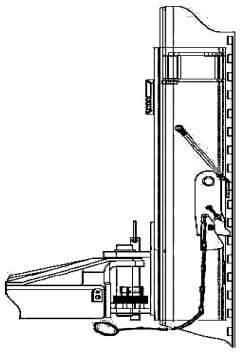
1.6 Warning labels

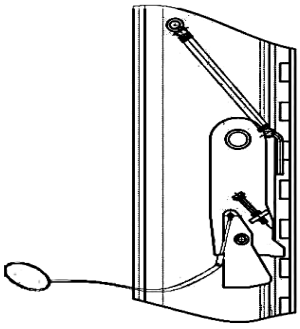
- There are some warning labels on the unit. Be sure you are familiar with them. Be sure they are clean and visible. If they get damaged in any way, replace them immediately.



2. Lift specifications

This two-post lift is composed of posts, cylinders, power unit and arms. It is powered with an electrohydraulic system. The pump circulates the oil to cylinders and makes the piston move. The piston moves the chain that lifts the carriage and lift's arms. While raising, a special safety part is locked automatically by the safety pawls in the posts. This eliminates the risk of the lift's arms dropping down, even if the hydraulic system breaks down.





Safety features

2.1 Technical data

Model	Capacity	Time to full rise	Max. lifting height	Height overall	Width overall	Space between posts
Two-post lift	4000 kg	55 s	193 cm	283 cm	338,5 cm	286 cm

3. Installation instruction

3.1 Before the installation

3.1.1 Essential tools

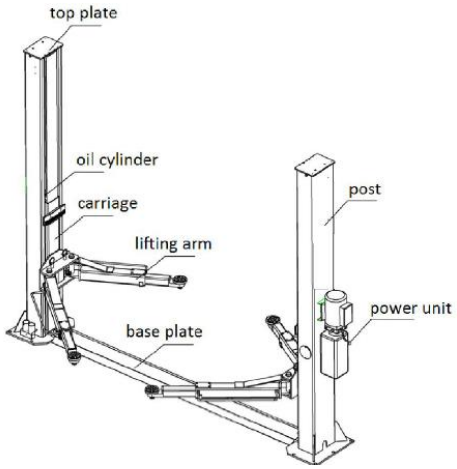
- lifting tools
- hydraulic oil
- rotary hammer drill (¾")
- chalk, tape measure
- crow foot caps, hex wrench set, flat and crosshead screwdrivers
- hammer, pliers with sharp edge, socket wrenches Φ17, Φ19, Φ22

Thoroughly check if you got all the parts in set – Attachment 1

Carefully inspect the shipment (Attachment 1). Check if any parts are missing or damaged, contact the dealer.

3.1.2 Ground conditions

Put the unit on a flat and even surface. Conditions: surface tolerance: less than 5 mm, minimal thickness: 300 mm. Also, the floor should be cured for a minimum 28 days.



3.2 Installation remarks

- Check if the lift's posts are straight and level to the ground. If they are not, be sure they are.
- The oil lines and steel cable must be securely tightened, so that there is no oil bleeding or loose connection.
- Torque all the bolts correctly.
- Do not put any vehicle on the lift's arms while testing.

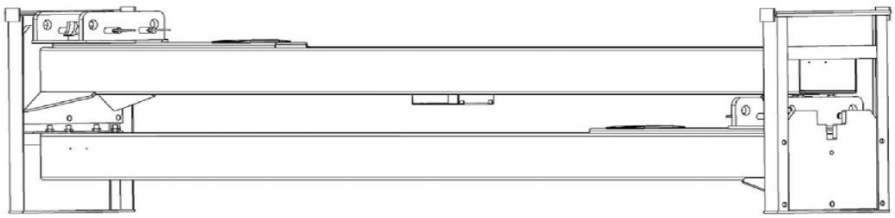
3.3 Installation

Step 1: Open the case and take all the parts out.

Step 2: Make sure the posts are properly secured - if not, secure them.

Caution: a post's dropping down can cause damage to the post and serious injury.

Step 3: After putting the first post in position, secure the second one from damage and remove the bolts.

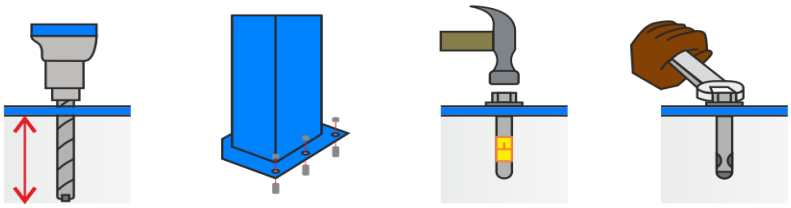


Step 4: Put both posts in the upright position (see Attachment 3, floor plan).

- Open the case and choose the post to put the power unit on.
- Use the chalk to mark the baseplate position on the floor and put the post in the position.

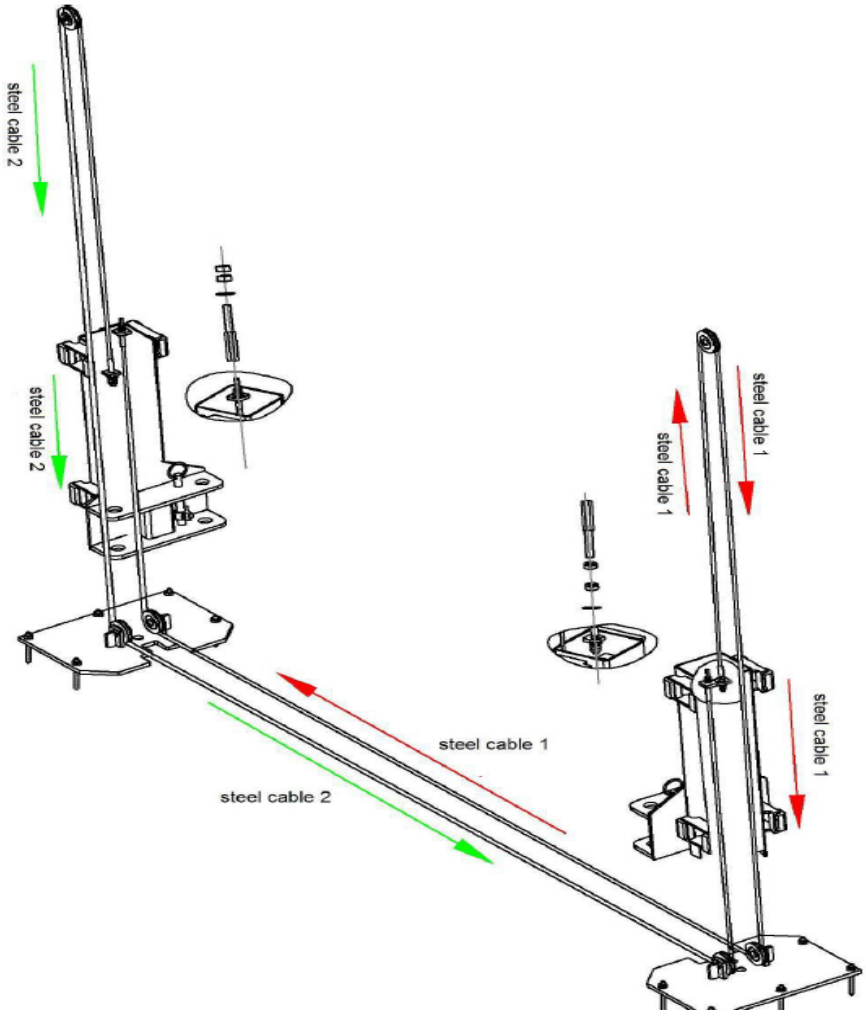
Step 5: Put the posts in the following drill: first, the post with power unit on, then the other one.

- Drill holes for bolts. Go in straight.
- Be sure to remove all the dirt from the hole, using a vacuum cleaner. Also, make sure that the posts are inside the plan you made with the chalk.

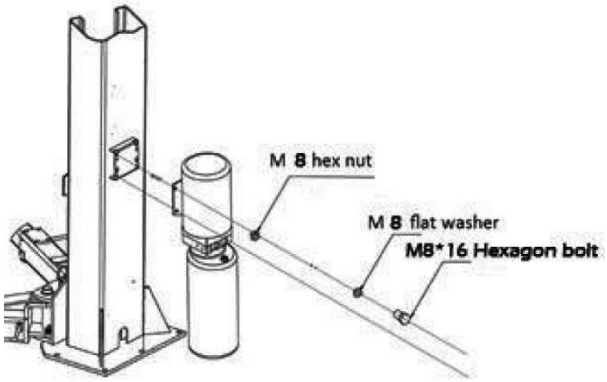


Step 6: Steel line installation

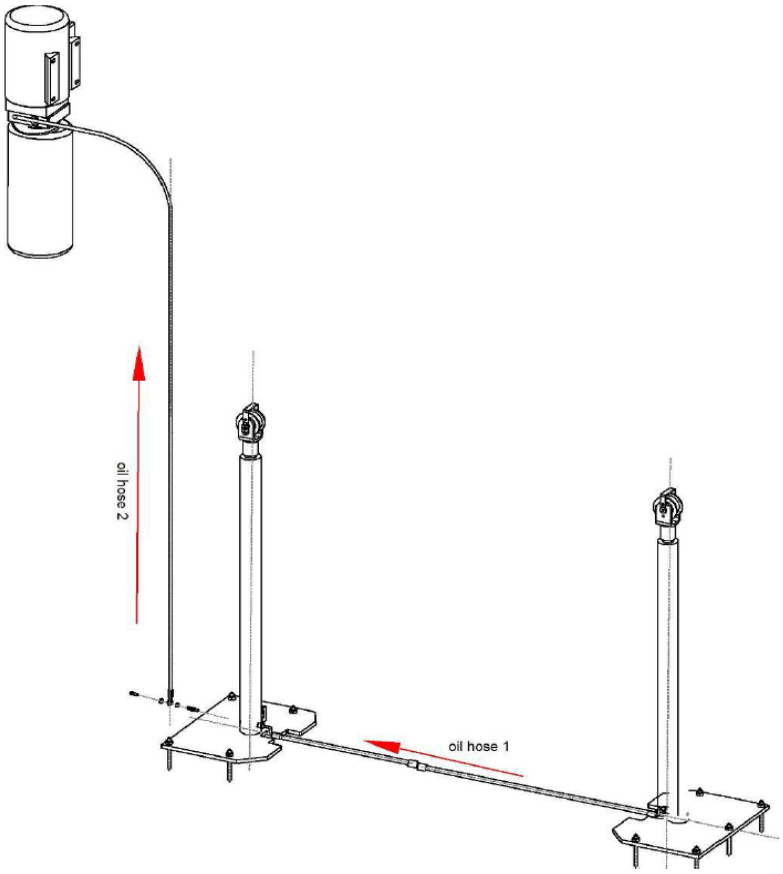
- Install the steel lines according to the drill:
- Lift the carriages on both sides by 80 cm. They should be on the same distance from the base.
- Make sure the safety pawls are engaged before you install cables.
- After installing the ropes, tighten them with the same force on both sides - it's easy to notice, by the sound it makes during lifting.
- Grease the ropes after installing (THAT'S A MUST), you can use hydraulic oil for this purpose.



Step 7: Put the power unit on the post

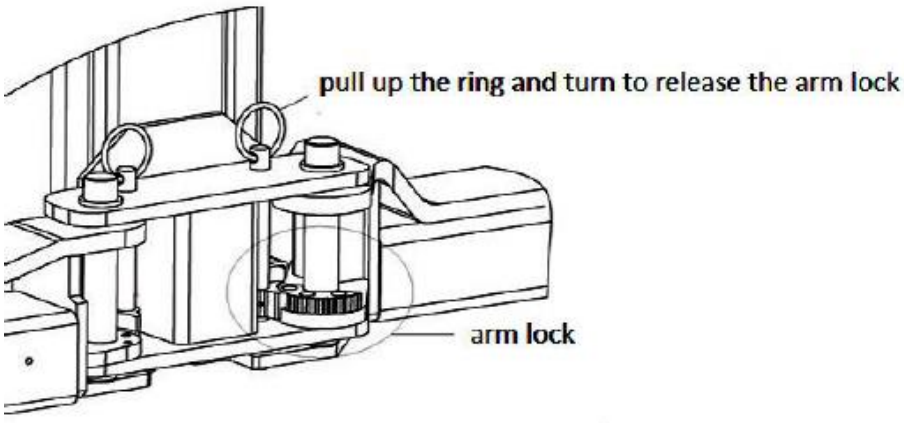


Step 8: Connect the oil lines.



Step 9: Install the arms

- Connect the arms and carriage using shafts.
- Install the arms on carriages and make sure the arm lock works correctly.

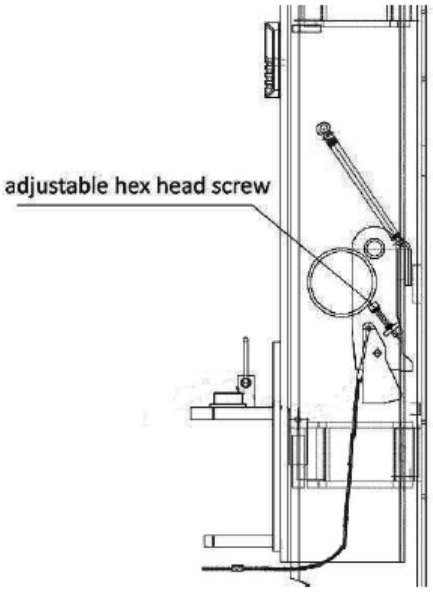


Step 10: Top-up the oil level

- The oil reservoir's capacity is 10l. For the lift to work correctly, the oil level should reach at least 80% of the reservoir's size. Use hydraulic oil - HL32 in winter, HL46 in summer.

Step 11: Perform an operational test

- Read this manual thoroughly and do not raise a vehicle on the lift during the test.
- Make sure mechanical locks can easily be engaged/released during operation. If they cannot, retighten the hexagonal screw, as shown in the picture (do it counterclockwise, if the lock is not able to engage and clockwise if it is not able to release).
- Make sure all connections are in good condition.
- Never raise a vehicle on the lift during the operational test.



Step 12: If you turn the engine on but the lift fails to raise, change the power cords, so that the rev direction changes.

Caution !!! the connections might be done by a certified electrician only.

3.4 Check after installation

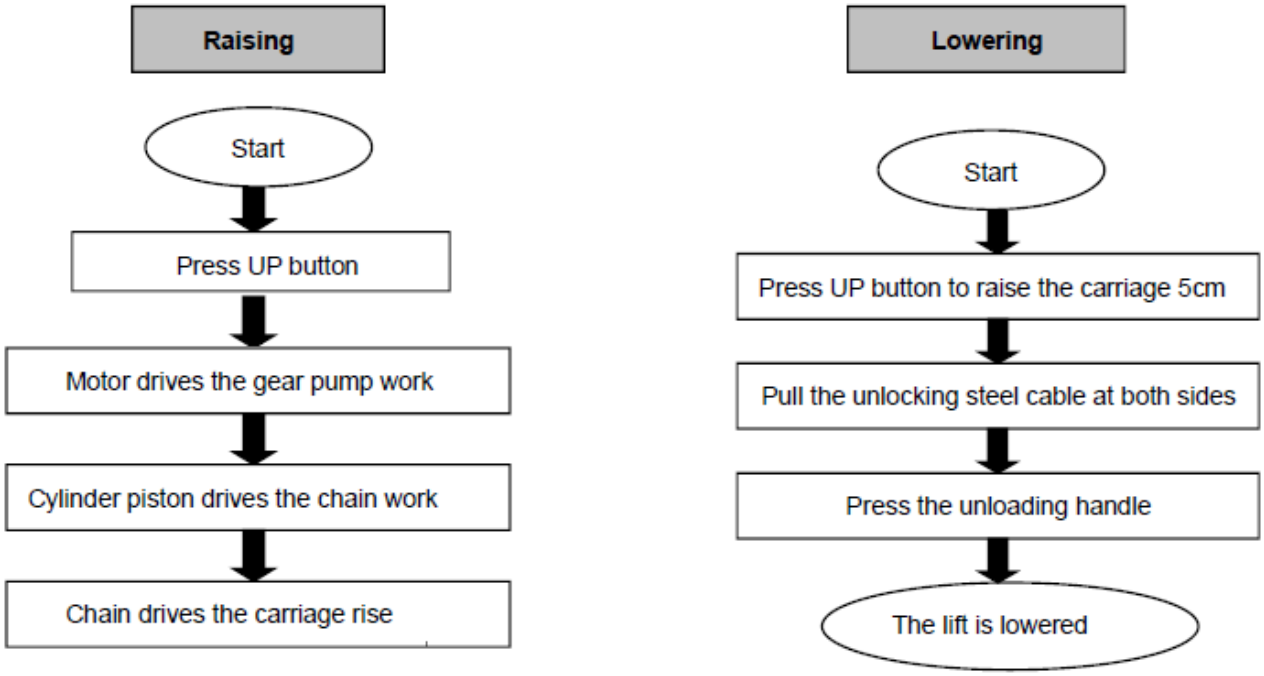
No.	What to look at?	YES	NO
1.	Do posts stand perpendicular to the ground?		
2.	Do posts stand even against each other?		
3.	Are the oil lines correctly connected?		
4.	Are steel cables correctly connected?		
5.	Are the arms properly installed?		
6.	Is the electrical installation properly installed?		
7.	Are all the connections securely tightened?		
8.	Are all the parts greased?		

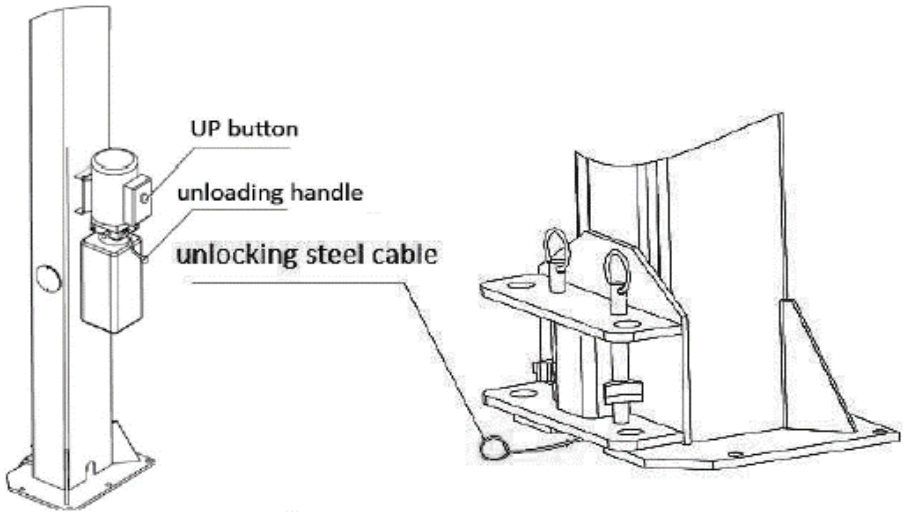
4. Working tips

4.1 Recommendations

- Check the oil line connections. Look for possible oil bleeding - if you notice any, do not turn the lift on.
- If the safety switch fails to work, do not turn the lift on.
- Never raise/lower a vehicle if it's center of mass is in the middle between the arms. As the manufacturer we cannot be held liable for any damage that happens due to this.
- Operator and other personnel should stay clear of the lift (in safety zone) while raising/lowering a vehicle.
- After lifting the arms to the desired height, disconnect the lift from the power source, so there is no risk of any interruptions by some third party.
- Make sure the lock is engaged before you start working under the car or raise/lower it.

4.2 Working principle





4.3 Working with lift

Raising the lift

- Read the instruction manual thoroughly before you start working with the unit.
- Drive onto the lift - in the space between the two posts.
- Adjust the lifting arms in a way that they fit the car's lifting points and make sure the car's center of mass in in the center, between 4 arms.
- Connect the power source, according to the information from the data plate. Turn the unit on.
- Push the "UP" button until the overlays touch the car's underbody.
- Raise the car a little and check if it is balanced.
- Raise the car to the desired height, make sure it is balanced and engage the safety lock. Do not start working under the vehicle until you are done with it.

Lowering the lift

- Push the "UP" button to raise the lift's arm and release the lock
- Release the safety pawls on both sides
- Lower the arms.
- After putting the arms in the lowest position, take them out from underneath the car and remove any obstacles from the surface.
- Drive the car away.

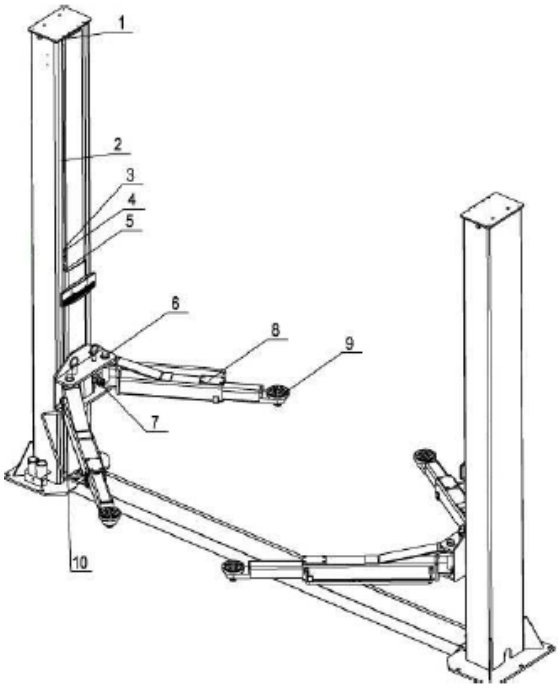
5. Troubleshooting

Caution! If you are unable to repair the problem yourself, please contact your local dealer. It would be of great help if you provide photos of the damage, along with details about the problem.

Problem	Cause	Solution
Strange sounds	Scratches inside posts	Grease the inside of the post
	Dirt inside posts	Remove the dirt
Engine does not turn on and does not raise	Loose connection	Check and correct
	Damaged engine	Replace the engine
	Damaged safety switch/power connection	Replace safety switch/check power connection
Engine works, fails to raise	Engine does not work correctly	Check power source
	Clogged flow-through valve	Clean the valve
	Chain pump is damaged	Replace it
	Low oil level	Top up the oil
	Oil hose is loose	Put it on again
Carriages move slowly	Oil hose bleeds	Check or replace
	Oil cylinder is not tightened	Replace it
	Single valve bleeds	Check or replace
	Electromagnetic valve does not work correctly	Clean or replace
	Steel lines are loose	Check and tighten again
Slow raising	Clogged oil filter	Replace it
	Low oil level	Top up the oil
	Overflow valve in incorrect position	Adjust it
	Oil temperature too high (over 45 degrees)	Change the oil
	Cylinder gasket has scratches	Replace the gasket
	Internal surface is scratched	Grease it
Too slow lowering	Clogged throttle	Clean or replace
	Dirty hydraulic oil	Change the oil
	Overvoltage valve is clogged	Clean it
	Oil hose is clogged	Clean it
Damaged steel lines	No grease during installation or damage.	Replace them

6. Maintenance

Just a few maintenance steps would help you improve the lift's reliability. Here's just a few tips on regular maintenance.



Be sure to grease the following parts:

Number	Name
1	Pulley
2	Steel lines
3	Gear
4	Chain
5	Chain guides
6	Screw
7	Arm lock
8	Lifting arm
9	Rubber pulley
10	Pulley

6.1 Daily maintenance

- Check if the lift works correctly.
- Check if the safety pawls engage properly - any problems could lead to injuries or material damage
- Check if the safety pawls engage properly - judging by the sounds
- Check if all the screws are correctly tightened

6.2 Weekly maintenance

- Check if the moving parts work correctly.
- Check if all safety features work correctly
- Check the oil level in the reservoir. If you can raise the carriage to the highest position, then it is fine. If not, the oil level is too low.
- Check if all the screws are correctly tightened

6.3 Monthly maintenance

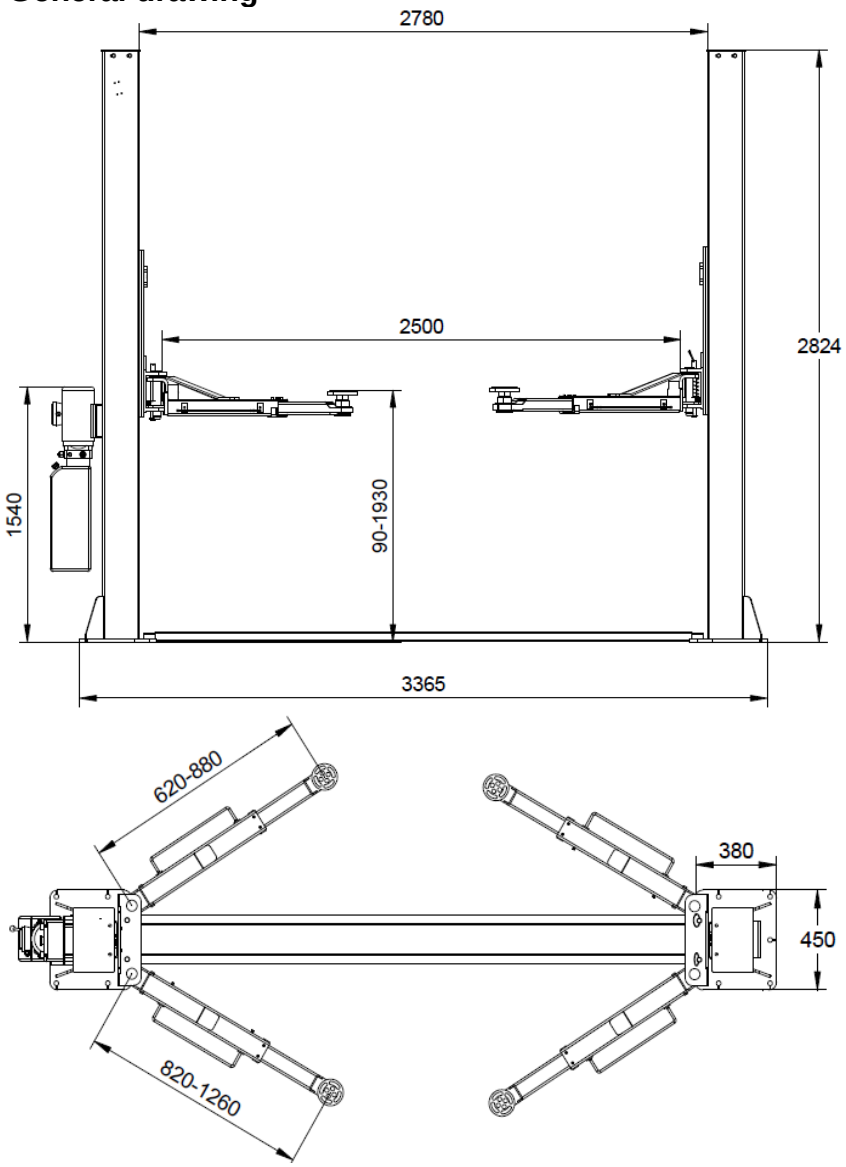
- Check for possible leaks in the hydraulic system and retighten, if there is a need for that.
- Check if all moving parts are properly greased.
- Check greasing of steel cables

6.4 Annual maintenance

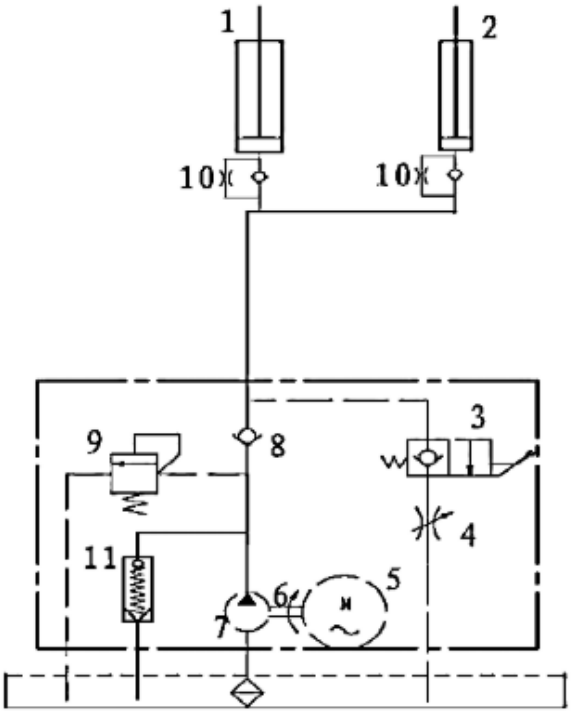
- Empty the oil reservoir and check the oil quality. Clean the oil filter.

Remember to follow the above rules - it will let your lift work trouble-free for a long time.

Attachment 1 General drawing



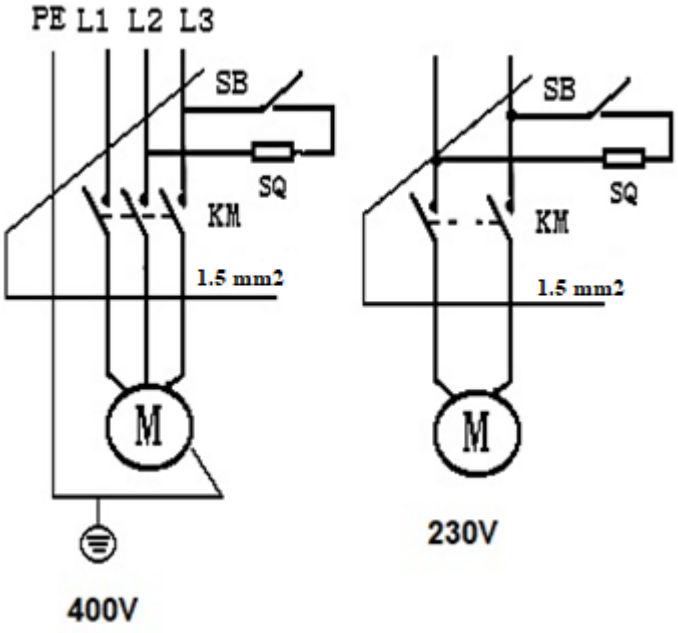
Attachment 2 Hydraulic system



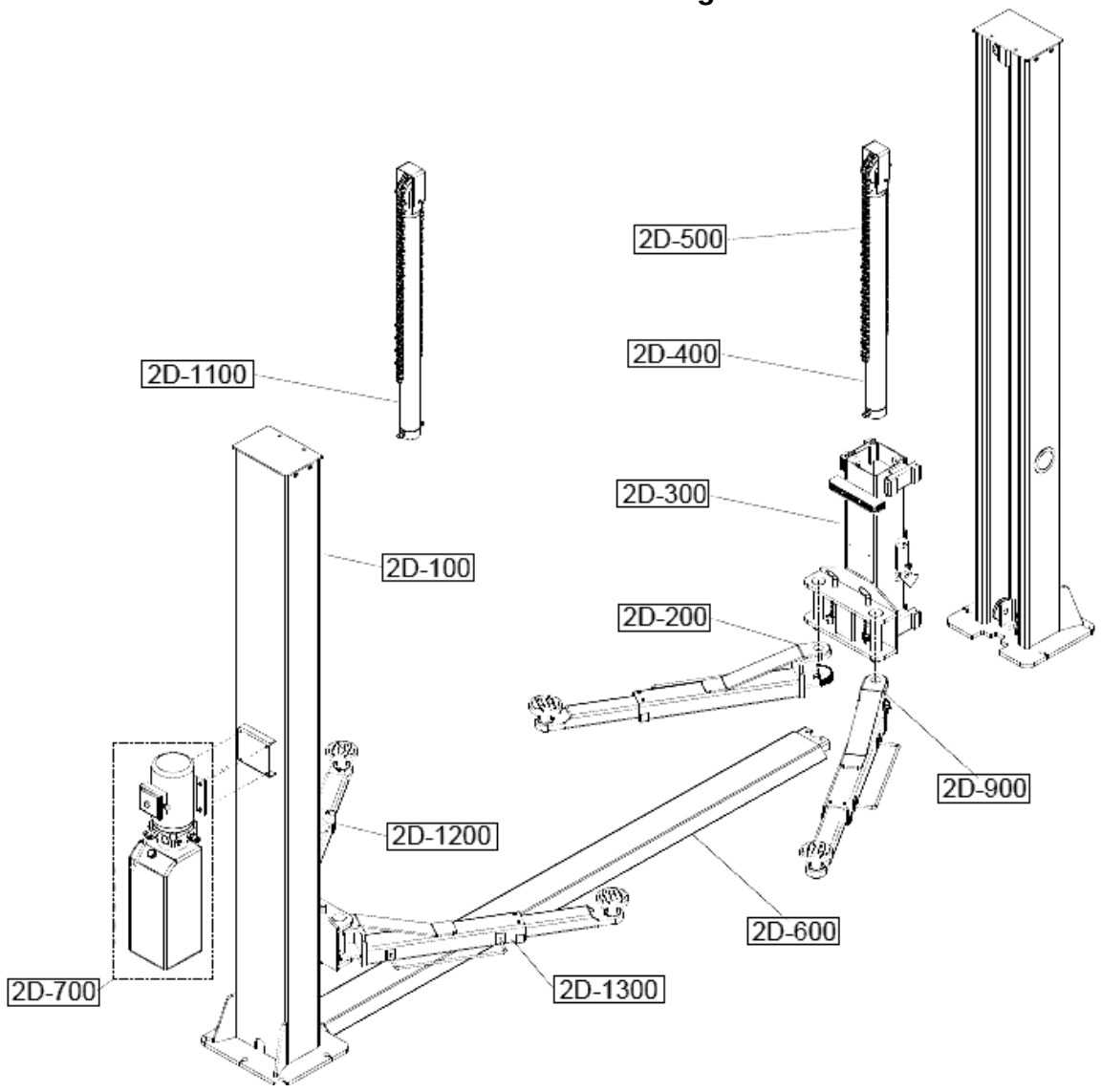
1. Drive oil cylinder
2. Assistant oil cylinder
3. Manual unloading valve
4. Throttle valve
5. Motor
6. Coupling
7. Gear pump
8. Single - way valve
9. Over-flow valve
10. Anti-surge valve
11. Cushion valve

Attachment 3 Electrical connections

M- Engine
L1- Phase wire 1
L2- Phase wire 2
L3- Phase wire 3
PE- Protective wire
KM- Contactor
SB- Button
SQ- Fuse
1.5mm2- Wire section



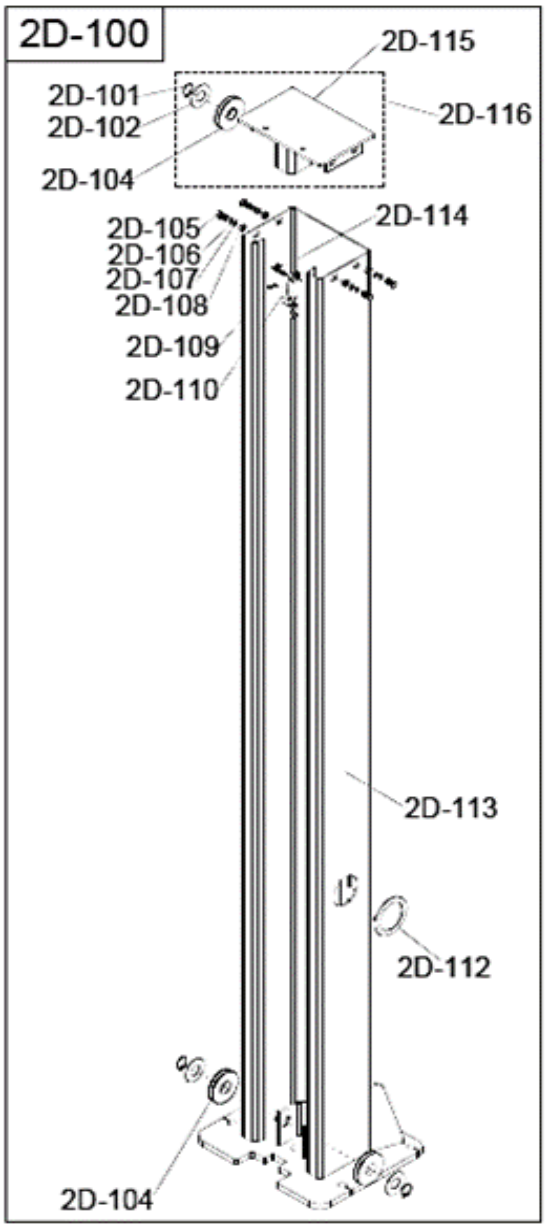
Annex 4 Installation scheme and detailed drawings

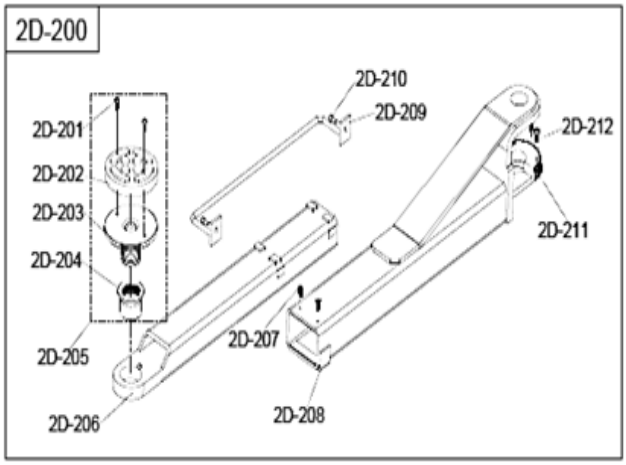


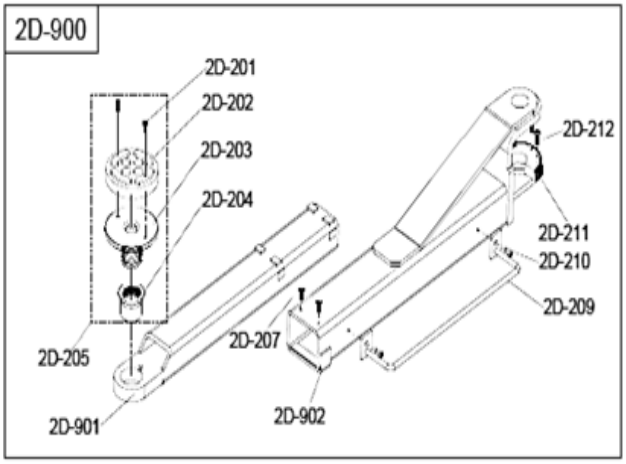
No.	Name	Qty.
2D-100	Complete column assembly	2
2D-200	Complete lifting arm assembly	2
2D-300	Complete carriage assembly	2
2D-400	Complete slave oil cylinder	1
2D-500	Chain	2
2D-600	Base plate	1
2D-700	Complete power unit assembly	1
2D-900	Complete lifting arm assembly	2
2D-1100	Complete master oil cylinder	1

Symbol	Name	Qty
2D-101	Shaft snap ring fi 25	6
2D-102	Large flat washer fi 25	6
2D-104	Pulley fi 108*25 mm	4
2D-105	Hex screw M12*25	8
2D-106	Spring washer fi 12	8
2D-107	Flat washer fi12	8
2D-108	Hex nut M12	8
2D-109	Cross round head cap screw M4*25	2
2D-110	Top limit switch	1
2D-112	Column cover	4
2D-113	Column	16
2D-114	Cross round head cap screw M4*25	8
2D-115	Top plate	2
2D-116	Complete top plate assembly	

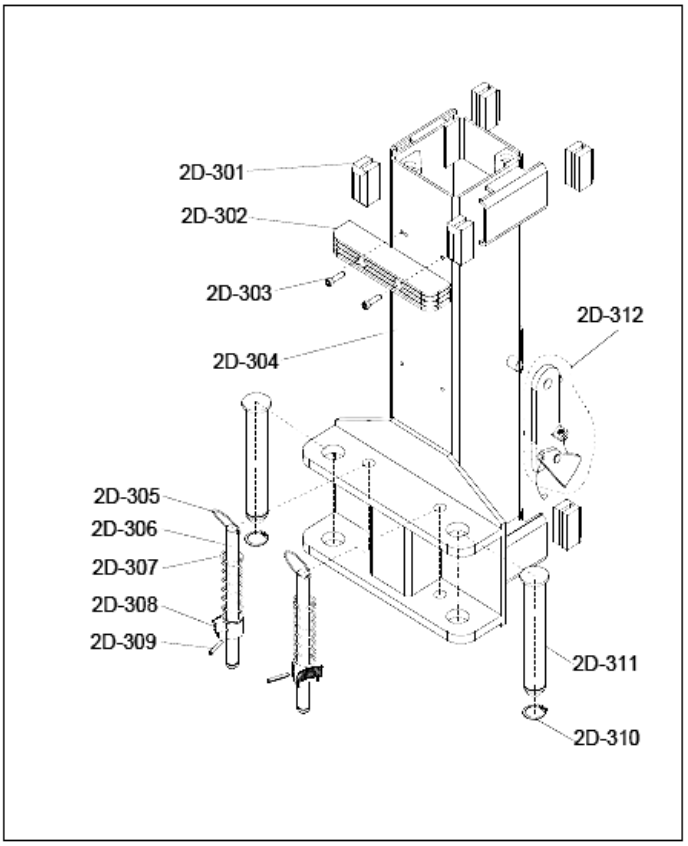
Symbol	Name	Qty
2D-201	Cross countersunk head screw M8*16	8
2D-202	Rubber lifting pad	4
2D-203	Lifting tray	4
2D-204	Swivel nut	4
2D-205	Complete tray assembly(2C-201,202,203,204)	4
2D-206	Lifting arm	1
2D-207	Cross socket head cap screw M8*12	8
2D-208	Lifting arm	2
2D-209	Fender	4
2D-210	Hex screw M8	8
2D-211	Semi-circle block	4
2D-212	Hex socket head cap screw M8*12	12
2D-901	Lifting arm	2
2D-902	Lifting arm	1



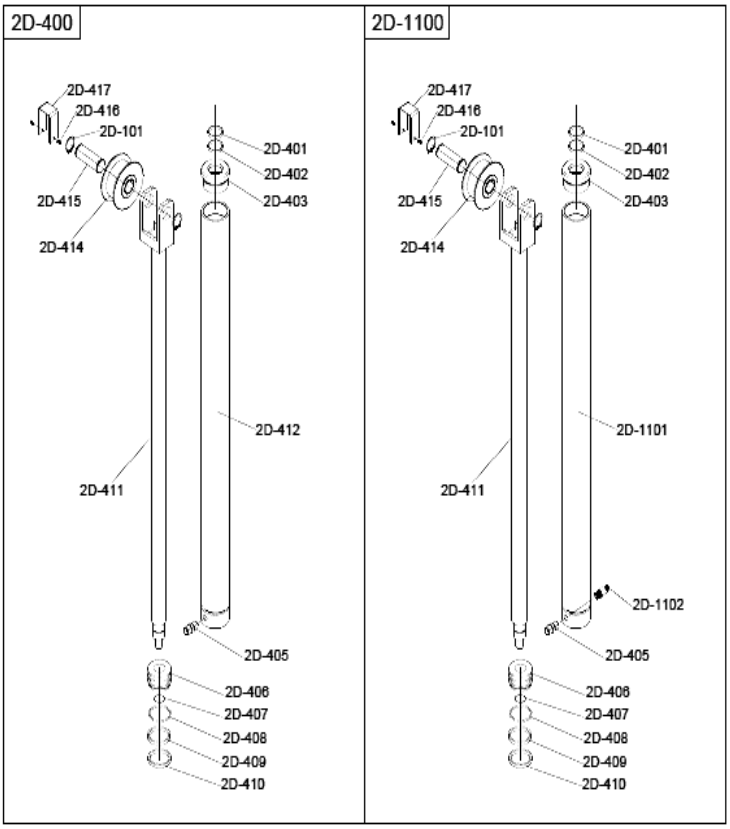




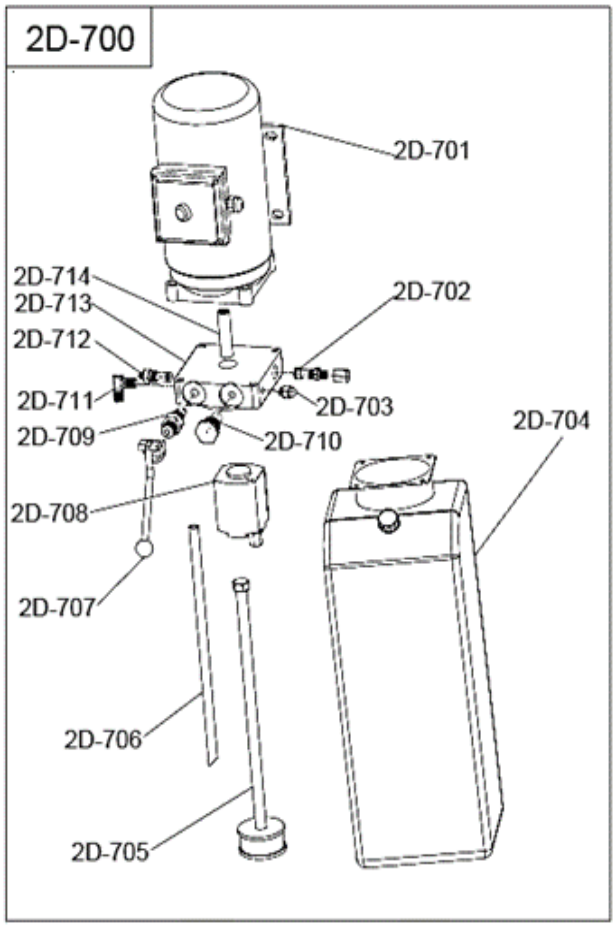
Symbol	Name	Qty
2D-301	Slider	16
2D-302	Protection rubber pad	2
2D-303	Cross flat head cap screw M8	4
2D-304	Carriage	2
2D-305	Key ring fi4*60	4
2D-306	Locking shaft fi 22	4
2D-307	Spring	4
2D-308	Teeth block	4
2D-309	Elastic cylindrical pin	4
2D-310	Shaft snap ring fi 40	4
2D-311	Pin shaft	4
2D-312	Insurance device	1

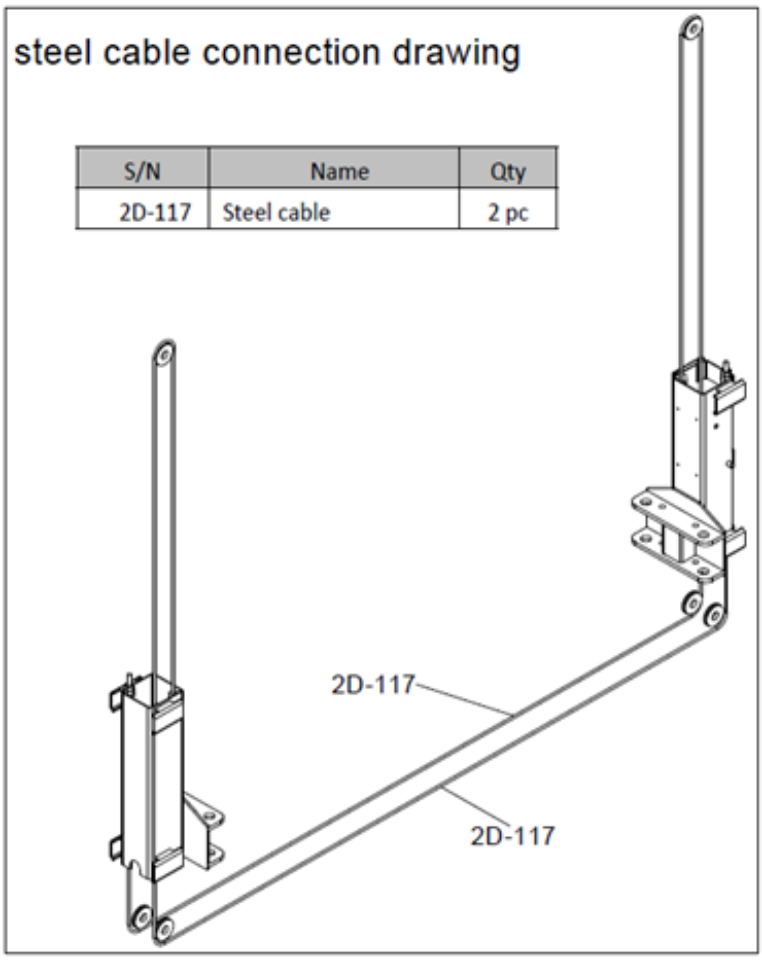


Symbol	Name	Qty
2D-401	O-ring 48*6 mm	2
2D-402	Orin 44*10 mm	2
2D-403	Oil cylinder cover	2
2D-405	Oil hose connector	2
2D-1102	Oil hose connector with valve	1
2D-406	Piston	2
2D-407	O-ring 25*4 mm	2
2D-408	O-ring 64*5,5 mm	2
2D-409	O-ring 63*9.2 mm	2
2D-410	Y-ring 63*10 mm	2
2D-411	Piston rod	2
2D-412	Slave oil cylinder	1
2D-414	Chain wheel	2
2D-415	Shaft	4
2D-101	Shaft snap ring fi30	4
2D-416	Hex socket head cap screw M8*16	4
2D-417	Stabilizer	2
	Sealing rings set (401,402,407,408,409 and 410)	2
2D-1101	Master oil cylinder	1



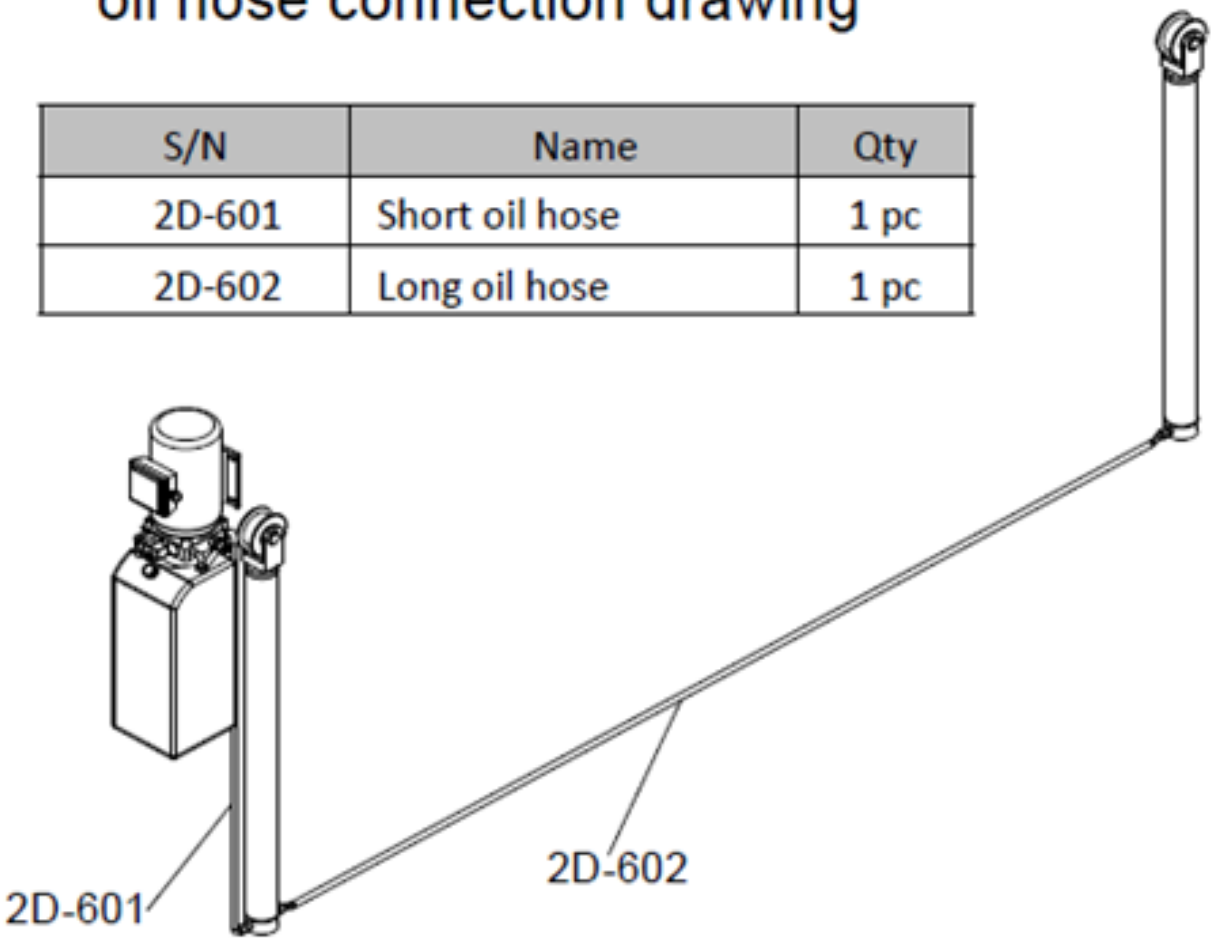
Symbol	Name	Qty
2D-701	Engine	1
2D-702	Overflow valve	1
2D-703	Plug	1
2D-704	Plastic oil reservoir	1
2D-705	Oil absorbing pipe	1
2D-706	Oil back pipe	1
2D-707	Unloading valve	1
2D-708	Gear pump	1
2D-709	Release valve	1
2DE-402	Solenoid valve	1
2D-710	Valve	1
2D-711	Oil hose connector	1
2D-712	Throttle valve	1
2DE-401	Valve seat	1
2D-714	Screw	1





oil hose connection drawing

S/N	Name	Qty
2D-601	Short oil hose	1 pc
2D-602	Long oil hose	1 pc



Jabłonna -Majątek 12
23-114 Jabłonna
NIP: 712-254-67-61
tel. 81-565-71-71, fax 81-470-93-67, sklep@phu-szczepan.pl, www.phu-szczepan.pl, www.redats.pl

The EC Declaration of Conformity (original)

CE-1

1/2019

P.H.U. SZCZEPAN
Wyposażenie Wulkanizacji i Warsztatów
Jabłonna-Majątek 12
23-114 Jabłonna

As an authorized representative of the manufacturer:

Nantong Balance Mechanical & Electronic Co., Ltd.
Jiangtian Road, Binhai Industrial Zone, Qidong,
Nantong, Jiangsu, P.R. China

Product:

Two post lift
Model: L-200F (PL- 4.0-2D)

Under the sole responsibility, we declare that the product is in conformity with:

EC Certificate, number CE-C-0831-16-164-21-5A issued on 2017.02.16 by Notified Body for Machinery Directive CCQS UK Ltd. Level 7 Westgate House, Westgate Rd., London W5 1YY UK.

The product complies with the essential requirements of the:
2006/42/EC Directive
as well as the detailed requirements specified in harmonized standards of:
EN IS0 12100:2010, EN 1493:2010, EN 60204-1:2006+A1:2009

This Declaration is a basis for applying the CE mark on the product.
This Declaration relates exclusively to the machinery in the state in which it was placed on the market and excludes components which are added and/or operations carried out subsequently by the final user.
Technical documentation is available at: PHU SZCZEPAN Wyposażenie Wulkanizacji i Warsztatów, Jabłonna Majątek 12; 23-114 Jabłonna, Poland

Jabłonna-Majątek, October 2019.

CE

P.H.U. SZCZEPAN
Kierownik Działu
Importu i Eksportu
Kamil Tarasiewicz

KOMPLEKSOWE WYPOSAŻENIE WULKANIZACJI
P.H.U. SZCZEPAN
Krzysztof Szczepaniak
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TEL.: 81 565-71-71, FAX: 81 470-93-67
NIP 712-254-67-61 REGON 060124860
23-114 Jabłonna, Jabłonna Majątek 12