

USER MANUAL



Welcome to select SDJ, SDJJ,SDJS Series manual hydraulic stacker.

### Attentions:

- Please read the instructions carefully before using this manual hydraulic stacker.
- This manual is general-purpose specification, and we reserve the rights of the manual hydraulic stacker technology improving. If the manual and material have discrepancies, in kind prevail.

Thanks for your understanding.



## Warning

Pay attention to the following matters before operating this stacker:

1. SDJ, SDJJ,SDJS manual hydraulic stacker can only be operated indoor on level and solid ground and it is strictly prohibited to operate this stacker in a corrosive environment with acid and alkali.

2. Please read this manual carefully and understand the performance of this stacker before operating; Inspection of the stacker should be conducted carefully every time before operation to ensure that the stacker is in normal condition. It is strictly prohibited to operate a stacker with trouble.

3. It is strictly prohibited to operate the stacker when overloaded. The load capacity and the load center should meet the requirements in the parameter table of this manual.

4. When SDJ, SDJJ,SDJS stacker is used for piling, the gravity center of the goods must be within the two forks and it is strictly prohibited to pile bulk goods.

5. When it is required to transport the goods for a comparatively long distance, the height of the forks from the ground should not exceed 0.5m.

6. When piling goods, it is strictly prohibited for people to stand under the forks or around the stacker.

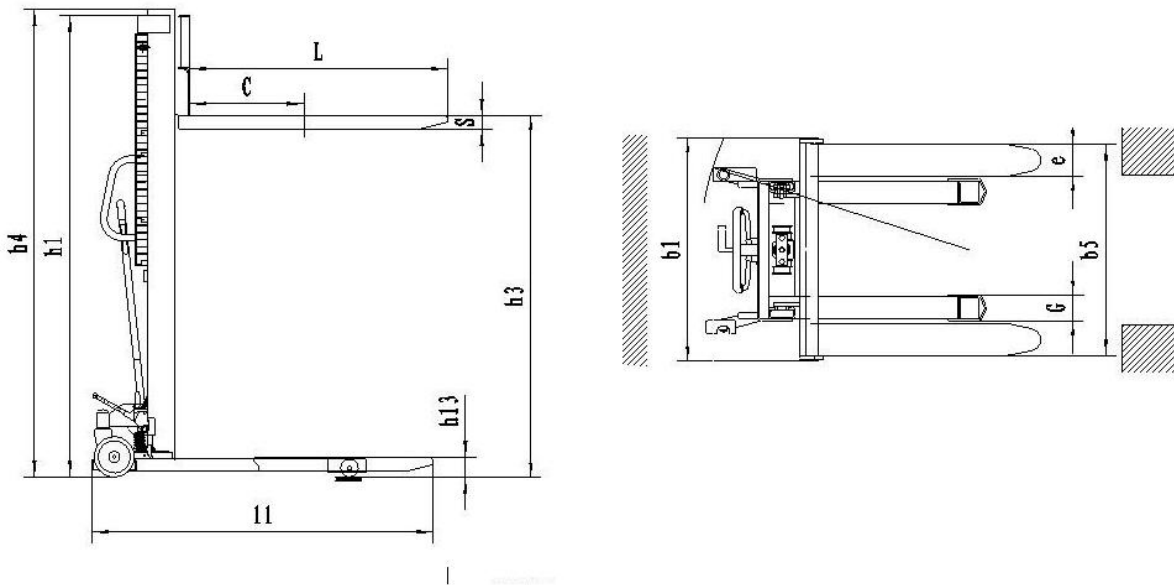
7. It is strictly prohibited to stand on the forks for operation.

8. When the goods are on high level, the goods should be pushed forward or pulled backward slowly and no cornering is allowed in such a case.

# 1. Product appearance and technical parameters

SDJ, SDJJ,SDJS Manual hydraulic stacker								
Model No.		SDJ, SDJJ,SDJS10 16	SDJ, SDJJ,SDJS 1516	SDJ, SDJJ,SDJS 2016	SDJ, SDJJ,SDJS 1025	SDJ, SDJJ,SDJS 1030	SDJ, SDJJ,SDJS 1525	SDJ, SDJJ,SDJS 1530
Capacity	Q (kg)	500/1000	1500	2000	1000	1000	1500	1500
Load center	C (mm)	500	400	400	500	500	400	400
Service weight	kg	100-190	270	290	290	316	310	336
Lowered mast height	h1 (mm)	1400-2086	2086	2086	1836	2086	1836	2086
Lifting height	h3 (mm)	1000-1600	1600	1600	2500	3000	2500	3000
Overall height	h4 (mm)	1400-2086	2086	2086	3000	3500	3000	3500
Fork lowered height	h13 (mm)	90						
Overall length	l1 (kg)	1360						
Overall width	b1 (kg)	765/980	765/980	765/980	765/980	765/980	765/980	765/980
Fork size	s/e/l (mm)	Fixed forks 60×142×1070 and 60×142×1150mm						
Fork width	b5	550/680/840/930						
Ground Clearance	m1	25						

Turning radius	Wa (mm)	1200
Lifting speed with/without load	mm/ stroke	9.5/10.5
Falling speed with/without load	mm/s	Hand control



## 2. Structural characteristics

SDJ, SDJJ,SDJS manual hydraulic stacker consists of a hydraulic system and a door frame.

The stacker uses a manual hydraulic jack (hydraulic device) as force to lift heavy goods, which are pushed, pulled and handled manually. The hydraulic device is equipped with an oil return valve and the fork decline speed is controlled via a hand lever to make the operation of the hydraulic system correct, safe and reliable. The door frame is welded with high quality section steel such as to good rigidity and high strength. Universal wheels with braking device are adopted as the back wheels, which can rotate freely, easily and flexibly. Both front and back wheels are installed on wheel shafts with ball bearings so as to rotate flexibly. Wear-resistant and durable Nylon wheels are adopted so that it is not

easy to damage the operation ground.

When lifting goods, insert the forks under the pallet of the goods, when necessary, brake the back wheels and pull the hand lever. The pinch wheel presses the pump core to make the oil in the pump cylinder flow into the piston cylinder, in order to push the piston rod move upward and lift the forks upward via a chain for a two times travel. Pull the hand lever back and forth so as to lift the goods and achieve the purpose of lifting. When the forks are lifted to the maximum height, the pressurized oil flows back into the oil tank via an oil draining hole and in that case, even the hand lever is pulled, the forks rise no more to avoid damaging components by impacting the top.

When handling heavy goods, the stacker is able to travel via manual pushing (pulling).

When unloading, pull the unloading hand lever, the oil return valve opens and with the effect of the dead weight of the heavy goods and forks, the operational oil in the piston cylinder flows back into the oil tank through the oil return valve, and when the piston rod and the forks decline to the lowest position, the goods are unloaded and the forks are withdrawn.

### **3. Operation conditions**

The operation of SDJ, SDJJ,SDJS manual hydraulic stacker should meet following conditions:

1. Ambient temperature for operation:  $-25^{\circ}\text{C}\sim+40^{\circ}\text{C}$ .
2. The relative humidity of the environment should be less than 90%RH.
3. The stacker can only operate in an environment without rain and harmful gas erosion.
4. The stacker can only operate indoor on level and solid ground.

## 4. Operation and maintenance

1. The oil must be filtered and clean and ensure sufficient oil quantity.
2. Before operation, inspection must be conducted for the stacker to ensure the stacker is in normal condition and there is no loose component.
3. The goods should be smoothly distributed on the forks and no overload is allowed.
4. After the operation is completed, the heavy goods should be unloaded and the heavy goods are not allowed to be on the forks for a long time.
5. When lowering goods, the hand lever of the oil return valve should be operated slowly and gently to avoid sudden declination during quick declination process which causes unsafe situation. When lowering the goods quickly, the oil return valve must not be closed suddenly as inertial acceleration is generated during the process of quick declination. If that, a great force will be generated to damage the components and goods.
6. Raise and pull outward the front part of the panel by hands, take off the panel and then the stacker can be used as pallet transporting cart or pallet stacker.
7. The brakes on back wheels are installed for the purpose of safety in operation process. When the forks are rising for lifting goods or is used as an operation platform, the brakes should be stepped down with foot to prevent the stacker from moving.

## 5. Possible failures in operation and trouble shooting

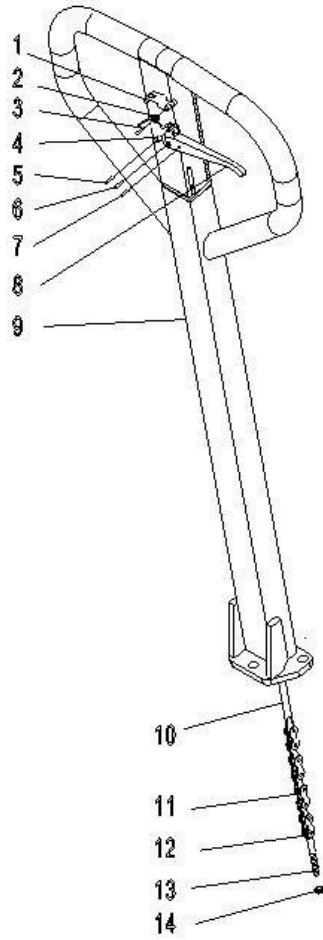
No.	Failure	Cause analysis	Trouble shooting
1	The lifting height cannot meet the design requirement.	Insufficient operation oil	To fill oil into the oil cylinder, turn out the bolt, fill in filtered and clean operation oil to the oil inlet height and then tighten the bolt.
2	When the hand lever is pulled, the forks do not rise.	1. The viscosity of the operation oil is too great or no operation oil has been filled in.	Replace or fill in operation oil according to the oil quantity regulated.
		2. There is foreign matter in operation oil, which makes the oil inlet valve cannot be tightly closed.	Filter out the foreign matter or replace operation oil according to the stipulation.
		3. The oil draining valve, unloading hand lever and tension spring do not work, are not at the lowest position or stuck by other foreign mater.	Examine the tension spring to see if it is correct, adjust the unloading hand lever to the lowest close position and remove foreign mater.
		4. The positions of the oil draining valve and unloading hand lever have not been correctly adjusted.	Readjust the unloading tension bar nut position.
3	After being raised, the forks do not decline	1. The lever plate or screw is not correctly adjusted.	Check and adjust lever plate and screw
		2. Too much unbalanced loading caused pump permanent deformation occurs.	Replace pump
		3. The fork carriage, roller or chain wheel is stuck, mast deformed.	Check and replace relative parts
4	Oil leakage	1. Damaged or failed seal washer.	Replace with new sealing washer, repair or



		2. There is slight crack or through hole in individual component.	replace new components, repair and tighten.
		3. Loose thread connection or non-tightly pressed sealing ring.	

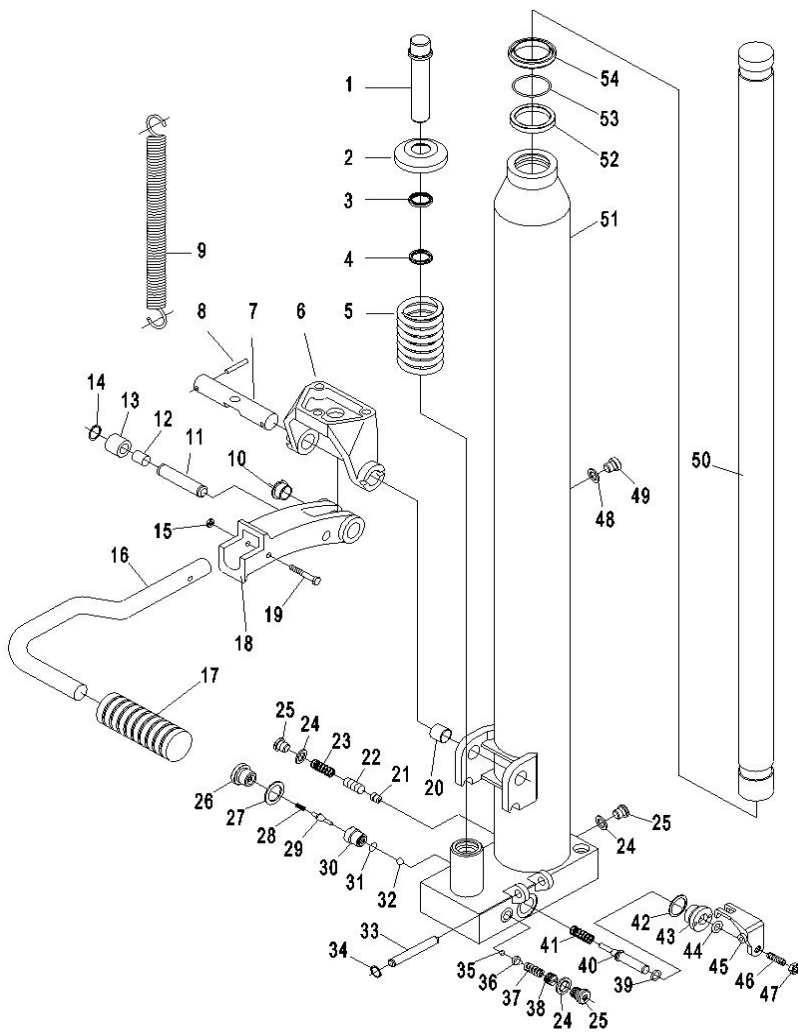
## 6. The structure chart of the main components (explosive view)

### 6.1、Handle



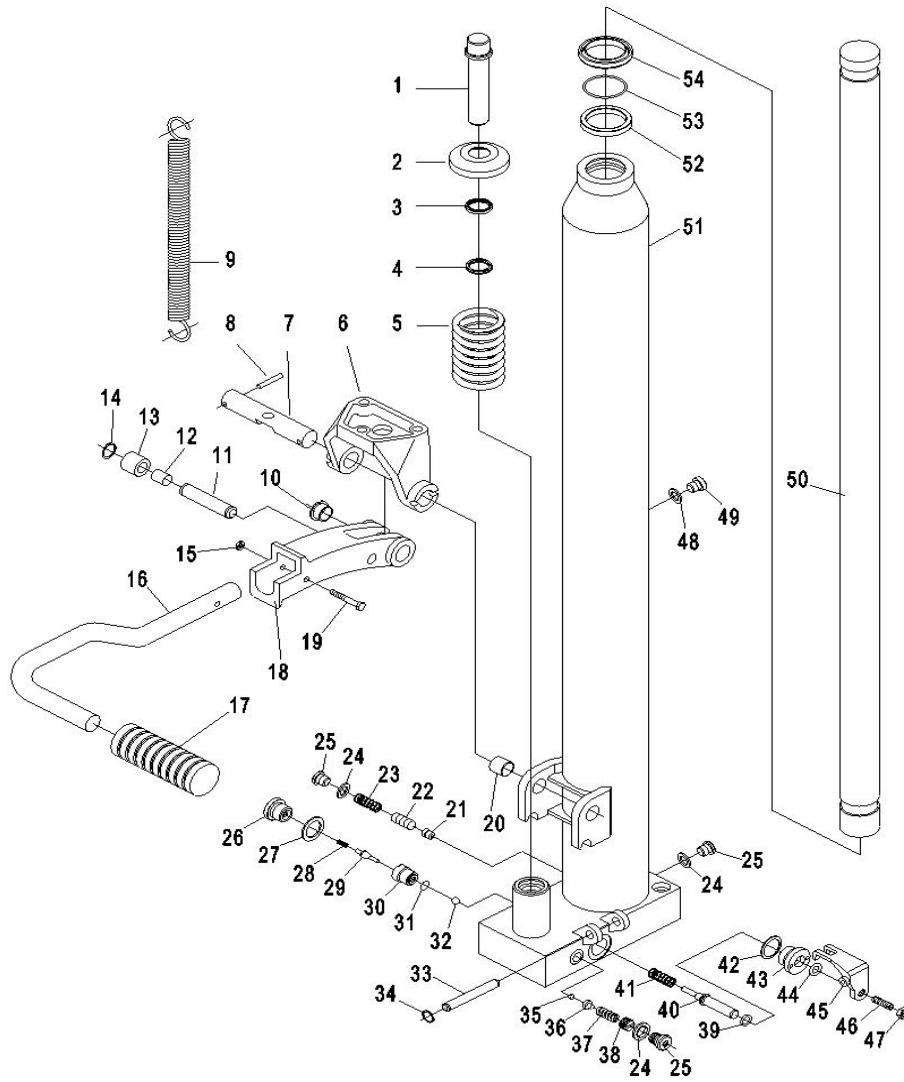
No.	Name	Qty	No.	Name	Qty
1	Blade Plate	1	9	Tube	1
2	Spring	1	10	Pull Pole	1
3	Pin 4×32	1	11*	Chain	1
4	Roller	1	12	Shaft	1
5	Pin 4×20	1	13	Bolt	1
6	Pin 6×32	1	14	Nut M5	1
7	Pin 4×20	1			
8	Hanle Knob	1			

### 6.2.1 Pump- (Standard)



No.	Name	Qty	No.	Name	Qty
1*	Pump Plunger 18	1	15	Nut M8	1
2	Cap	1	16	Foot Pedal	1

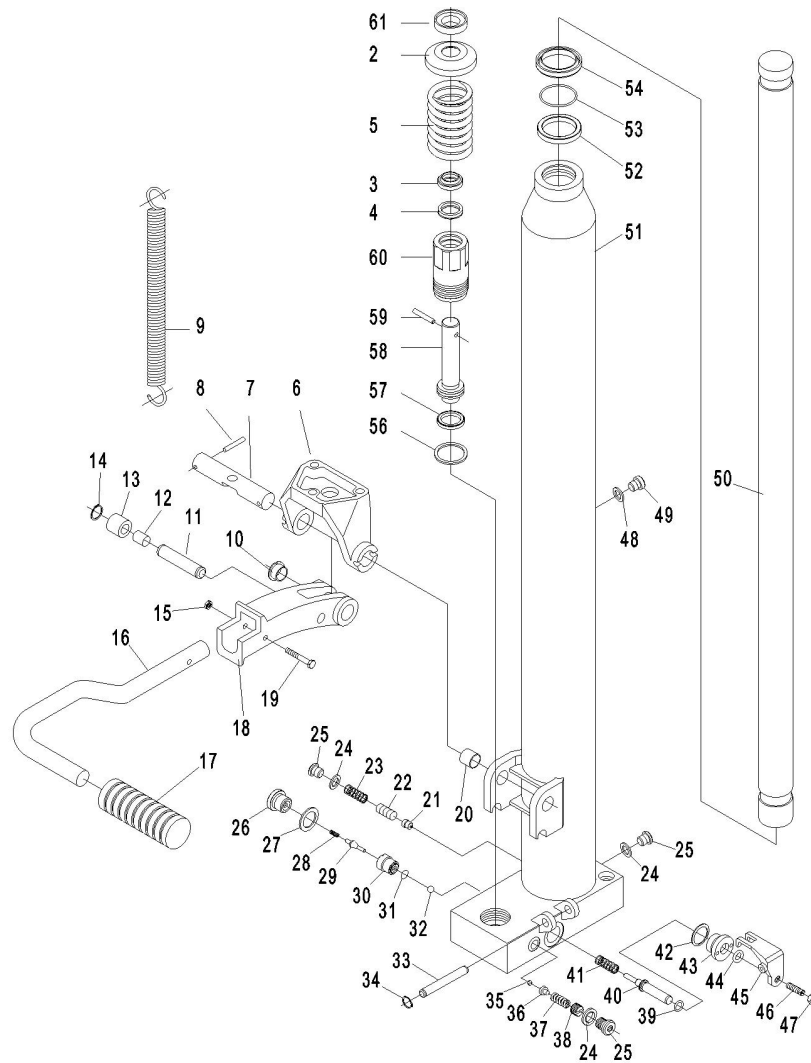
3*	Dust Ring 18	1	17*	Rubber Cover	1
4*	Seal Ring 18	1	18	Pedal Frame	1
5	Spring	1	19	Bolt M8×40	1
6	Press plate	1	20	Bush 20×23×10	2
7*	3-hole shaft 20×105	1	21	Valve Washer	1
8	Pin 5×28	2	22	Valve	1
9	Pull Spring 2.5×16×180	1	23	Valve Spring 1×6×23.5	1
10*	Bush 20×23×11.5	2	24	Seal Washer 10	2
11	Shaft 12×45	1	25	Screw M10×1	2
12*	Bush 12×14×20	1	26	Screw M16×1.5	1
13*	Roller 26×14×22	1	27	Seal Washer 16	1
14	Shaft Spring Ring 12	2	28	Valve Spring 0.5×4.8×21	1



No.	Name	Qty	No.	Name	Qty
29	Strike Pin	1	42	Seal Washer 20	1
30	Valve M16×1.5	1	43	Pin Seat	1
31	O Ring 10.6×1.8	1	44*	O Ring 8×2.65	1
32	Steel Ball 7	1	45	Lever Plate	1
33	Shaft 8×56	1	46	Screw M6×20	1
34	Axle Spring Ring 8	2	47	Nut M6	1
35	Steel Ball 5	1	48*	O Ring 7.5×2.65	1

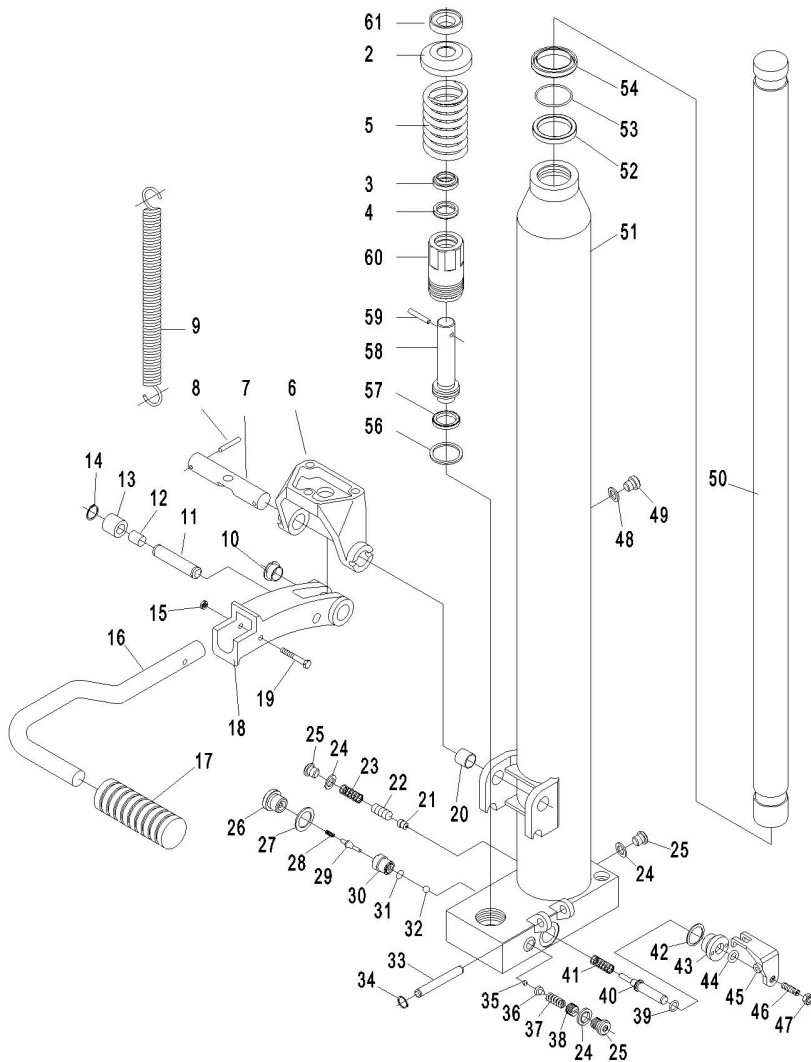
36	Ball Seat	1	49	Screw M8×1	1
37	Spring 2×8×16	1	50	Piston 32/35/40×L	1
38	Screw M10×1	1	51	Piston Pipe 32/35/40×L	1
39	O Ring 6.9×1.8	1	52	Seal Ring 32/35/40	1
40	Strike pin	1	53*	O Ring 32/35/40×3.55	1
41	Spring 1.2×10×22	1	54*	Dust Ring 32/35/40	1

#### 6.2.2 Pump (double speed)



No.	Name	Qty	No.	Name	Qty
2	Cap	1	17*	Rubber Cover	2
3*	Dust Ring 18	1	18	Pedal Frame	1
4*	Seal Ring 18	1	19	Bolt M8×40	1
5	Spring	1	20	Bush 20×23×10	2
6	Press plate	1	21	Valve Washer	1
7*	3-hole shaft 20×105	1	22	Valve	1
8	Pin 5×28	2	23	Valve Spring 1×6×23.5	1
9	Pull Spring 2.5×16×180	1	24	Seal Washer 10	2

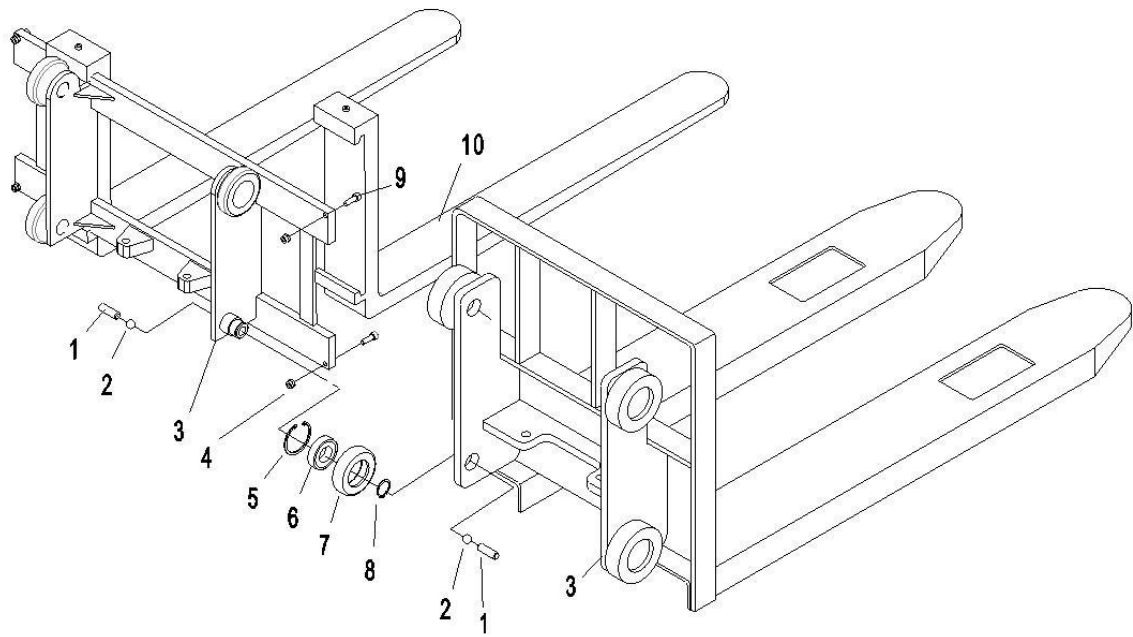
10*	Bush 20×23×11.5	2	25	Screw M10×1	2
11	Shaft 12×45	1	26	Screw M16×1.5	1
12*	Bush12×14×20	1	27	Seal Washer 16	1
13*	Roller 26×14×22	1	28	Valve Spring 0.5×4.8×21	1
14	Shaft Spring Ring 12	1	29	Strike Pin	1
15	Nut M8	1	30	Valve M16×1.5	1
16	Foot Pedal	1	31	O Ring 10.6×1.8	1
			32	Steel Ball 7	1





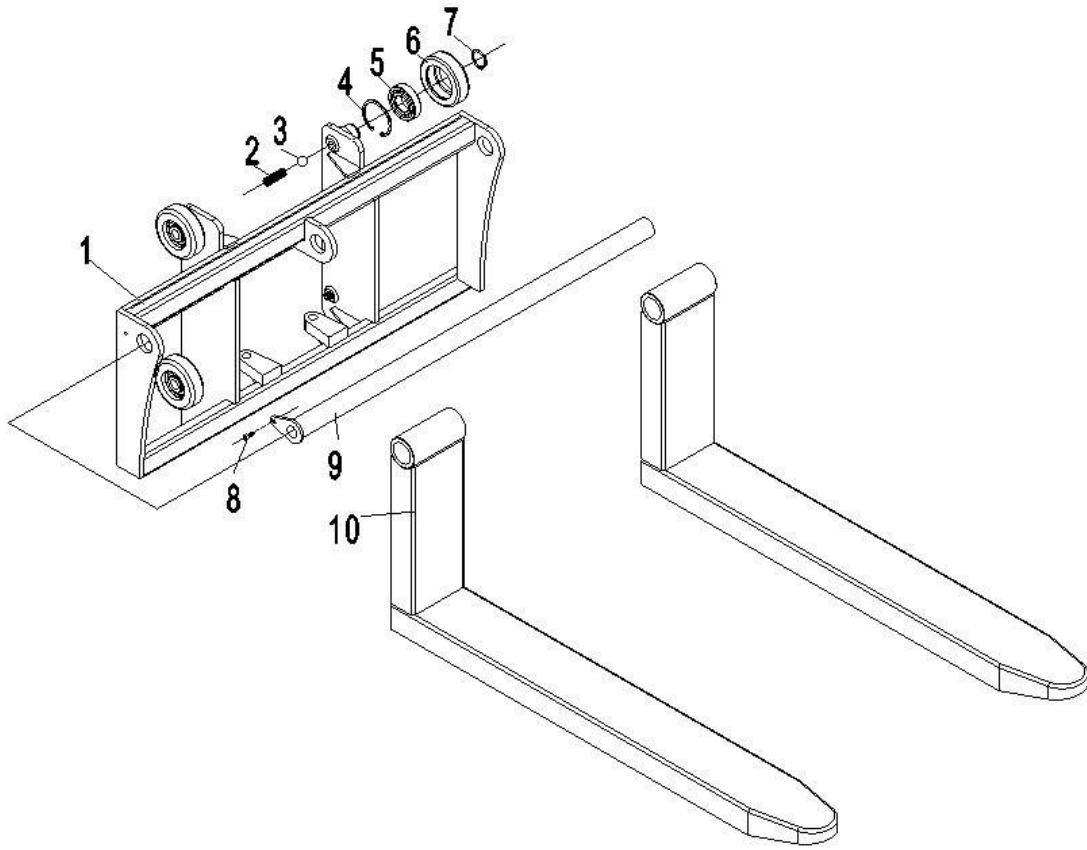
No.	Name	Qty	No.	Name	Qty
33	Shaft 8×56	1	47	Nut M6	1
34	Axle Spring Ring 8	2	48*	O Ring 7.5×2.65	1
35	Steel Ball 5	1	49	Screw M8×1	1
36	Ball Seat	1	50	Piston 32/35/40×L	1
37	Spring 2×8×16	1	51	Piston Pipe 32/35/40×L	1
38	Screw M10×1	1	52	Seal Ring 32/35/40	1
39	O Ring 6.9×1.8	1	53*	O Ring 32/35/40×3.55	1
40	Strike pin	1	54*	Dust Ring 32/35/40	1
41	Spring 1.2×10×22	1	56	Washer 34.5×29×1.5	1
42	Seal Washer 20	1	57	Washer 28×20.5×3	1
43	Pin Seat	1	58*	Double Speed Piston 18×28×97	1
44*	O Ring 8×2.65	1	59	Pin 4×25	1
45	Lever Plate	1	60	Double Speed Barrel	1
46	Screw M6×20	1	61	Washer	1

### 6.3 Fork Carriage (fixed forks, forged forks):



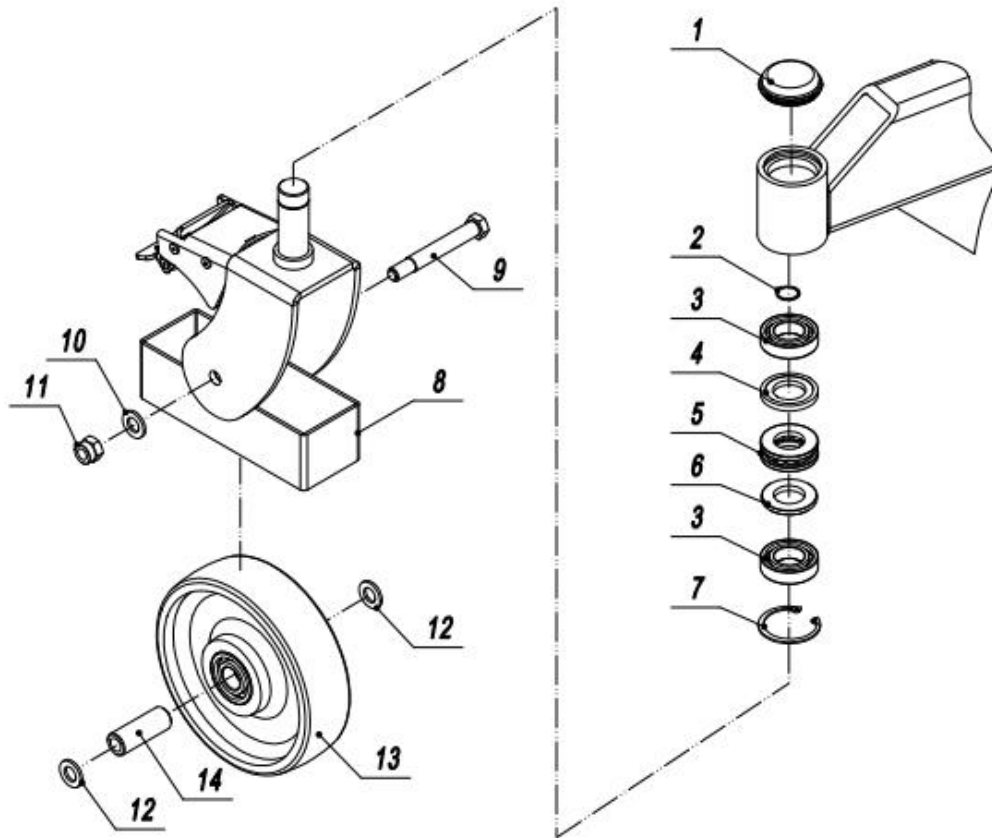
No.	Name	Qty	No.	Name	Qty
1	Screw M16×50	4	7*	Slide Wheel 86.5	4
2	Steel BallΦ19	4		Slide Wheel 106	4
3	Fixed forks welding	1		Slide Wheel 102	4
	Adjustable forks welding		8	Axle Spring Ring 35	4
4	Nut M10	2	9	Bolt M10×40	2
5	Hole Ring D72	4	10	Forks	2
6	Bearing 6207				

6.4 Fork Carriage (Adjustable forks):



No.	Name	Qty	No.	Name	Qty
1	Slide Carriage	1	7	Axle Spring Ring 35	4
2	Screw M16×50	4	8	Screw M6×16	1
3	Steel Ball Φ19	4	9	"L" Long Shaft	1
4	Hole Spring Ring 72	4	10	Forks	2
5*	Bearing 80207	4			
6*	Slide Wheel 86.5	4			
	Slide Wheel 106	4			
	Slide Wheel 102	4			

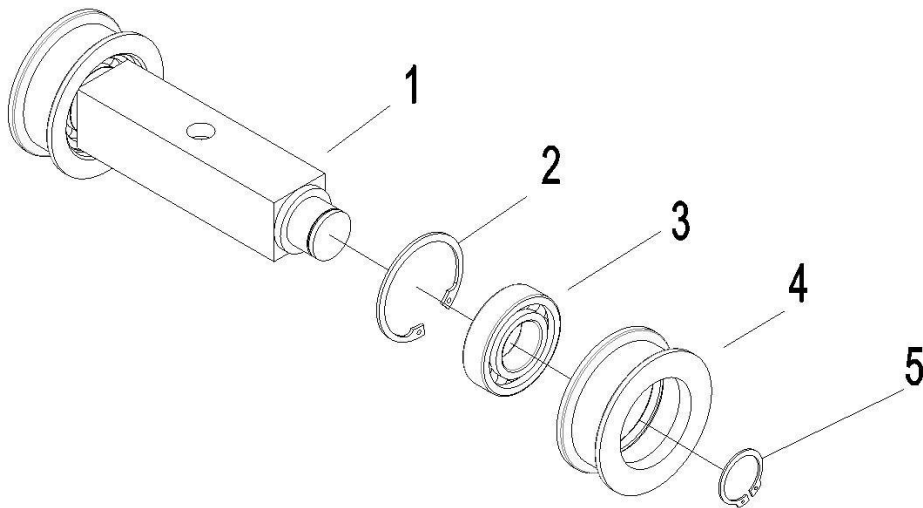
### 6.5 Caster with brake



No.	Name	Qty	No.	Name	Qty
1	Dust Cover	2	8	Wheel Frame	2
2	Axle Spring Ring D25	4	9	Bolt M12*95	2
3	Bearing 6005	2	10	Flat Ring 12	2

4	Washer 45*25.5*5	2	11	Nut M12	2
5	Bearing 51205	4	12	Bush 20.5*25*2.5	2
6	Washer 46.5*27*5	2	13	Nylon wheel	2
7	Hole Ring 47	2	14	Shaft	4

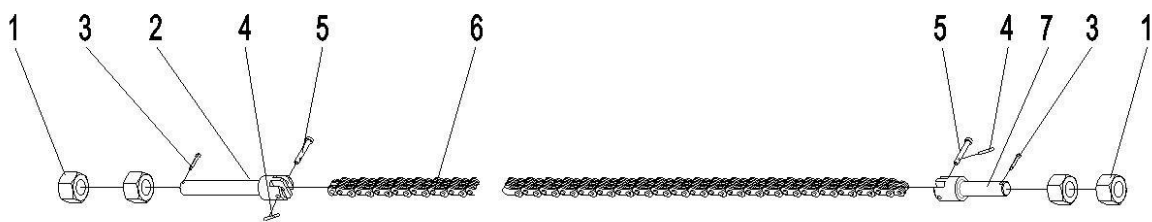
### 6.6 Chain Wheel



No.	Name	Qty	No.	Name	Qty
1	Chain wheel shaft (single mast)	1	4	Chain Wheel	2
	Chain wheel shaft (double mast)	1	5	A Axle Spring Ring d30	2
2	A Hole Spring Ring D62	2			

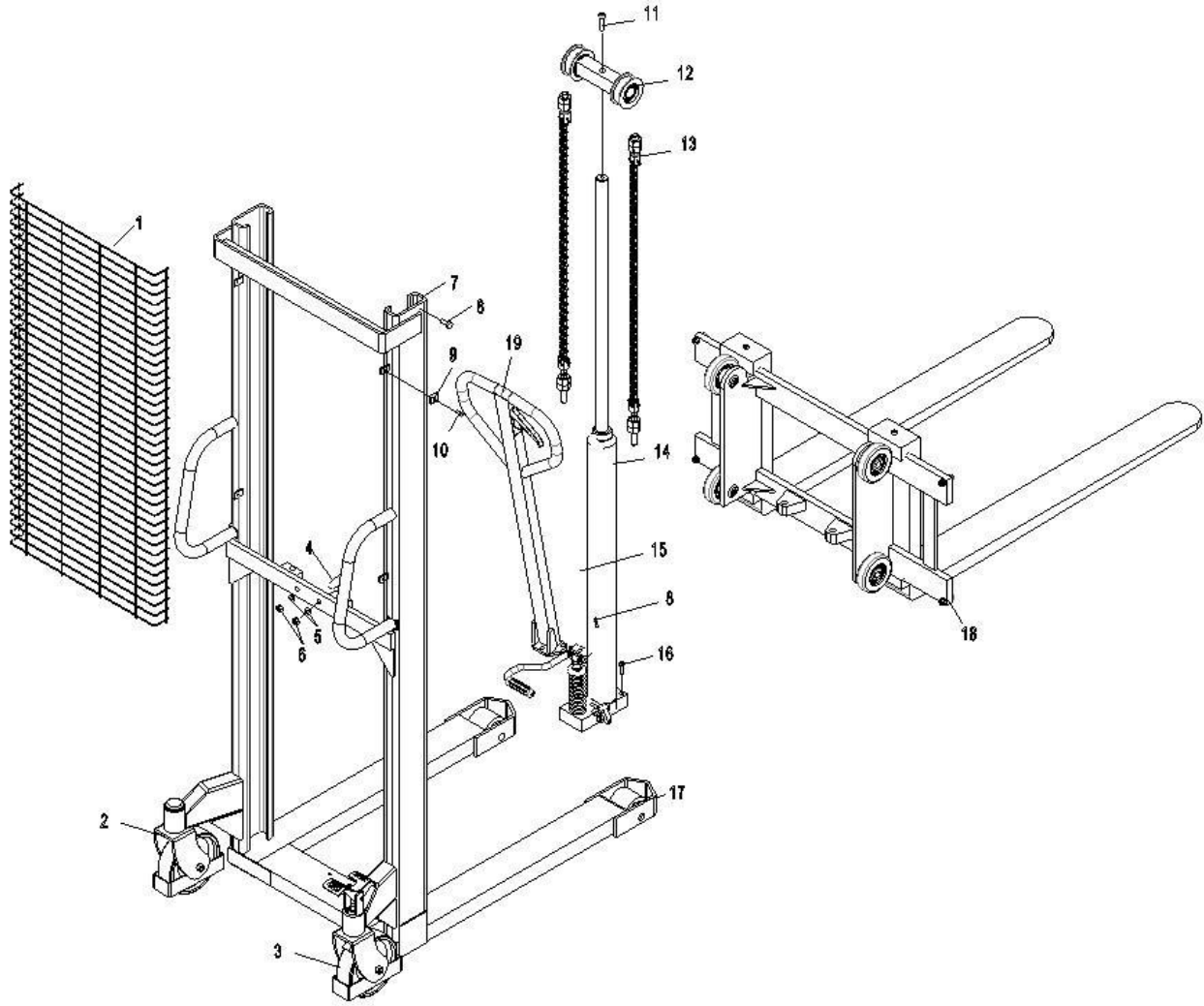
3	Bearing 6206	2			
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### 6.7 Chain



No.	Name	Qty	No.	Name	Qty
1	Nut M16	4	5	Shaft $\Phi 5$	2
2	Chain puller M16 $\times$ 1.5	1	6	Chain LH0846	1
3	Pin 2.5 $\times$ 25	4	7	Chain puller M16 $\times$ 1.5	1
4*	Pin 2 $\times$ 16	4			

### 6.8 Single Mast

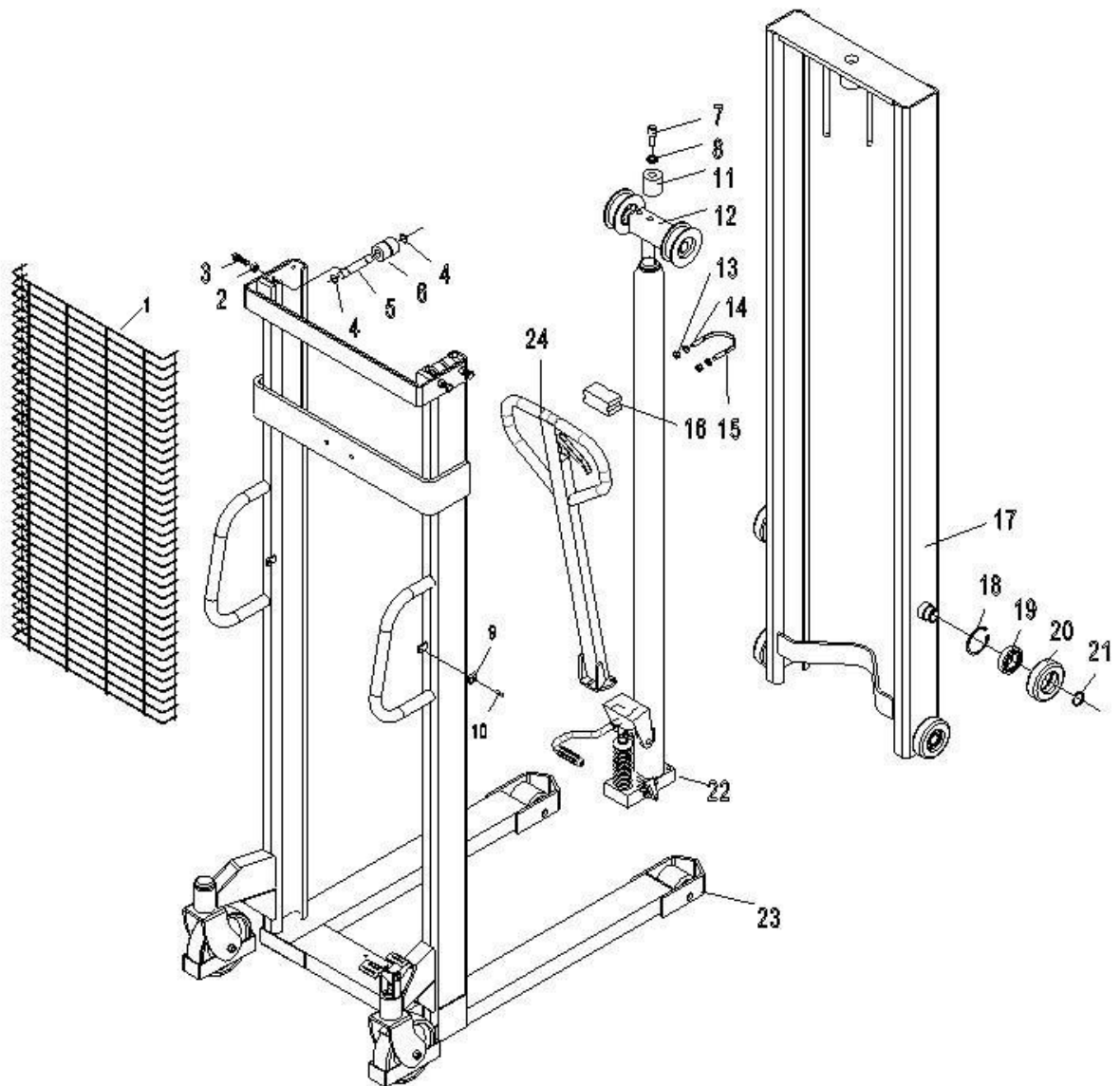


No.	Name	Qty	No.	Name	Qty
1	Mesh Cover	1	13	Chain Wheel	2
2*	Caster	1	14	Pump	1
3*	Caster with Brake	1	15	Handle Assembly	1
4	Screw M10×45	2	16	Screw M8×35	2
5	Flat Washer 10	2	17	Single front wheel $\Phi 80 \times 93$	2
6	Nut M10	2		Double front wheel $\Phi 80 \times 70$	2
7	Out Mast	1	18	Adjustable forks	1
8	Screw M10×25	7		Fixed Forks	1



9	Fixed part	6	19	Handle Assembly	1
10	Screw M6×16	6			
11	Screw M10×40	1			
12	Chain Wheel	1			

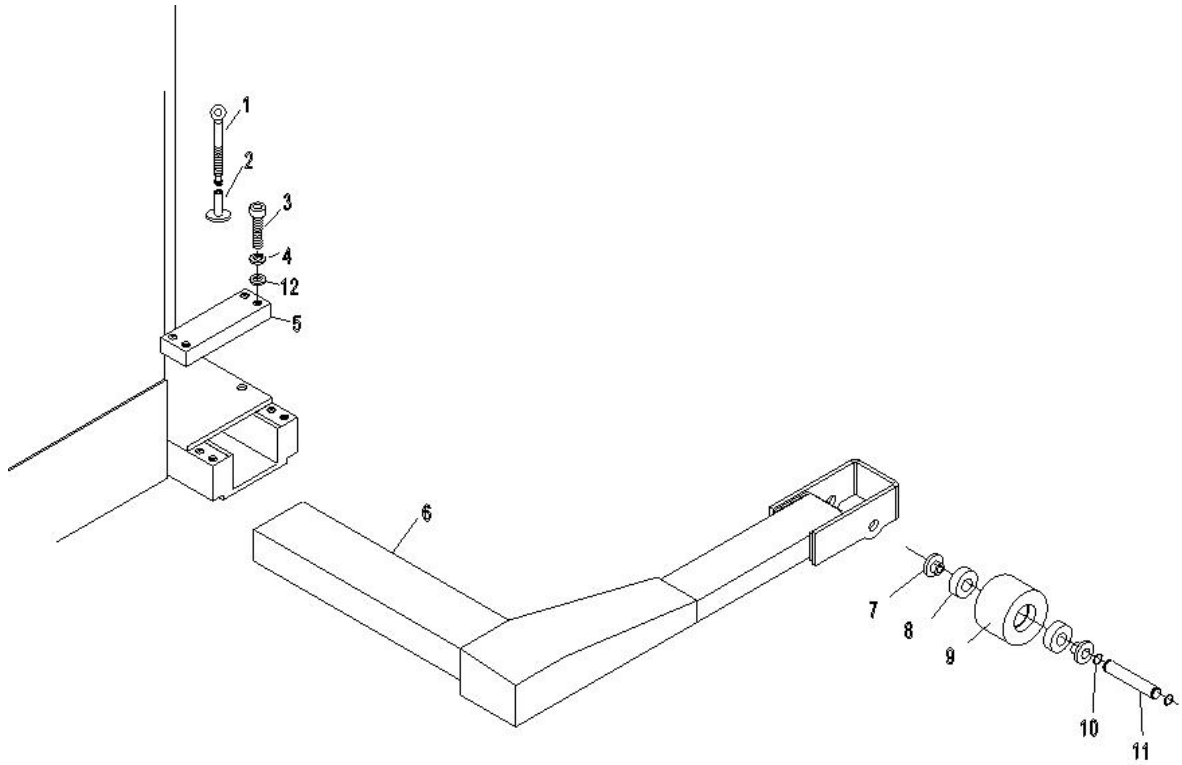
### 6.9 Double Mast



No.	Name	Qty	No.	Name	Qty
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1	Mesh Cover	1	14	Flat Washer 10	2
2	Nut M10	4	15	Fixing plate	1
3	Bolt M10×60	4	16	Rubber Pad	1
4	Axle Spring Ring d20	4	17	Inside mast	1
5*	Shaft	2	18	Hole Spring Ring	4
6	Side Slide Wheel	4	19	Bearing 80207	4
7	Screw M10×45	1	20	Slide Wheel 86.5	4
8	Spring Washer 10	1		Slide Wheel 106	4
9	Jacking Plate	1		Slide Wheel 102	4
10	Fixing Screw	6	21	Axle Spring Ring d35	4
11	Screw M6×16	6	22	Pump	1
12	Chain wheel shaft assembly	1	23	Out mast	1
13	Nut M10	2	24	Handle Assembly	1

## 6.10 Straddle Legs



No.	Name	Qty	No.	Name	Qty
1	Pole	2	7	Bush	4
2	Supporting	2	8	Bearing	4
3	Screw	8	9	Forks	2
4	Spring Washer	8	10	Axle Spring Ring	4
5	Press Plate	2	11	Shaft	2
6	Leg	2	12	Plat Washer	8