



## Operating Instructions and Parts Manual

### Mast-R-Lift Excel

Model 02201A



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**Important!!**

**Read and understand the contents of this manual  
before assembly or operation of this product.**

Thank you for choosing this product from JessEm Tool Company. We appreciate your support and hope that our product serves you well. This product is designed to provide many years of reliable service provided it is used as intended and taken care of.

This user manual will assist you in assembly and general operation of this product. It is not our intent to teach you about woodworking. It is assumed that you are an experienced woodworker with the basic skills and experience necessary to use this product safely. If after reading the following instructions, if you are unsure or uncomfortable about safely using this product we urge you to seek additional information through widely available woodworking books or classes.

As part of our Continuous Product Improvement Policy, JessEm products are always advancing in design and function. Therefore there may be differences between what is shown in our catalogs, website or at retail display and what is sold at time of purchase. We reserve the right to make positive changes to our products at our discretion.

**Model #02201A**

**Designed to accept Porter Cable Router Model #7518/7519**

**Adapter Collars**

**Model 02111 – Fits Porter Cable 690/890, Bosch 1617/1618, DeWalt 610/616/618**

**Model 02113 (3-1/4” diameter) – Fits Makita 1101**

**Model 02115 – Fits Hitachi M12VC and KM12VC**

**Model 02118 – Fits Milwaukee 5615/5616/5619**

**Shim Kit Model 02116 – Fits Milwaukee 5625**

## **IMPORTANT SAFETY PRECAUTIONS**

- Before operating any router, read and understand all safety instructions in the owner's manual that came with the router.
- If you do not have a manual, contact the manufacturer and obtain one before using any power tool.
- Always wear eye protection in compliance with ANSI safety standards when operating any power tool.
- Always use proper guards and safety devices when operating power tools and machinery.
- Carefully check router bits before each use. Do not use if damage or defect is suspected.
- Do not exceed the recommended RPM for any router bit.
- Do not wear loose clothing or jewelry that may catch on tools or equipment.
- Unplug the tool or machine when mounting or making any adjustments to mechanical performance.

**DO NOT USE A CORDLESS DRILL TO RAISE AND LOWER THE LIFT CARRIAGE. THE AMOUNT OF FRICTION WILL CAUSE PREMATURE WEAR OF THE THREADS.**

## **ROUTER SAFETY PRECAUTIONS**

- Never force the bit or overload the router beyond the expectations of the tool.
- Be sure that at least 3/4 of the shank length is inserted securely in the router collet.
- Never bottom out the bit in the collet. Allow 1/8" clearance between shank and bottom of collet.
- Always make sure the fence on your router table is locked into position before each use.
- Always rout in two or more passes when large amounts of stock must be removed.
- Use reduced RPM speeds for large diameter bits.

### **CALIFORNIA PROPOSITION 65 WARNING**

**This product contains lead known to the State of California to cause cancer or reproductive harm. Components made of brass are known to contain lead. Wash hands after using this product.**

## Suggested Router Bit Speeds

<u>Bit Diameter</u>	<u>Max. Speed</u>
1" (25mm)	24,000 RPM
1-1/4" - 2" (30-50mm)	18,000 RPM
2-1/4" - 2-1/2" (55-65mm)	16,000 RPM
3" - 3-1/2" (75-90mm)	12,000 RPM

## JessEm Tool Company Limited Warranty

All JessEm products are warranted to be free from defects in material and workmanship. JessEm will repair or replace any product which upon inspection proves to be defective for a period of (1) year from dated receipt and proof of purchase. All warranty claims should be made direct to JessEm Tool Company. Contact JessEm for a warranty claim return authorization and instructions to proceed. The consumer is responsible for shipping costs to return product to JessEm Tool Company. We will repair or replace the product at our discretion and JessEm Tool will return shipment to you at no charge.

## WARRANTY LIMITATIONS

This warranty does not cover:

- Repairs or alterations made or attempted by anyone other than JessEm Tool Company or an authorized JessEm service professional.
- Normal wear and tear
- Abuse, misuse or neglect.
- Improper care or maintenance.
- Continued use after partial failure.
- Products that have been modified in any way.
- Products used with improper accessories.
- Premature thread wear due to adjusting height with electric or cordless drill

## CONTENTS:

(1) Mast-R-Lift Excel, (1) Height Adjustment Handle, (1) Insert Ring, (1) Insert Ring Wrench, (1) Hex Key, (1) Start Pin

**TOOLS REQUIRED FOR ASSEMBLY:** 6mm and 8mm Hex Key

**TOOLS REQUIRED FOR ADJUSTMENT:** 10mm Wrench

## PRODUCT ASSEMBLY:

1. Place the Mast-R-Lift Excel upside down on a flat surface. Remove the ball crank handle, set screw and hex wrench from the hardware bag. Start the set screw in the handle part way (Fig 1).
2. The handle attaches to the shaft on the gear box by tightening the set screw to the shaft (Fig 2).

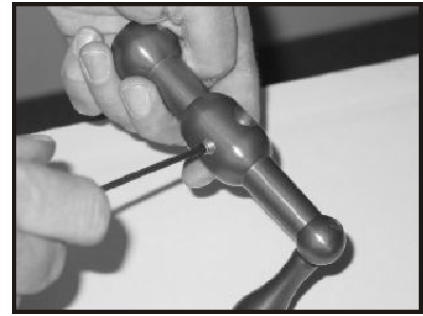


Figure 1

## INSTALLING THE ROUTER:

Before installing the router you should prop the unit up on blocks of wood so that the router's collet can extend through the center hole in the table and allow the motor housing to slide all the way through and contact the insides back of the center hole retainer ring.

1. Crank the ball crank handle to move the carriage housing all the way down toward the bottom of the table so that it just touches the base of the lift housing.
2. Loosen the cap screw on the carriage clamp to allow the motor to slide into the carriage assembly (Fig. 3).

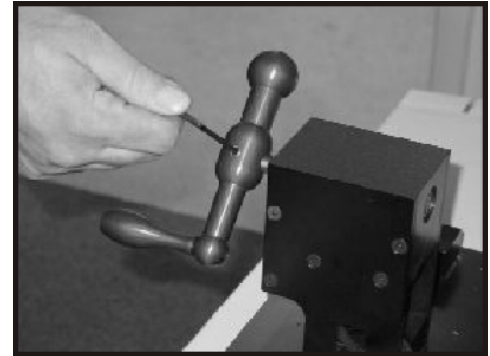


Figure 2

## NOTE FOR INSTALLING A ROUTER OTHER THAN PORTER CABLE 7518:

The Mast-R-Lift Excel will fit the Porter Cable 7518 out of the box. If you are using a router with a smaller motor diameter you will need an adapter collar designed for your particular router. If you are using a router that requires an adapter collar now place the collar into the carriage assembly and then proceed to step 3.

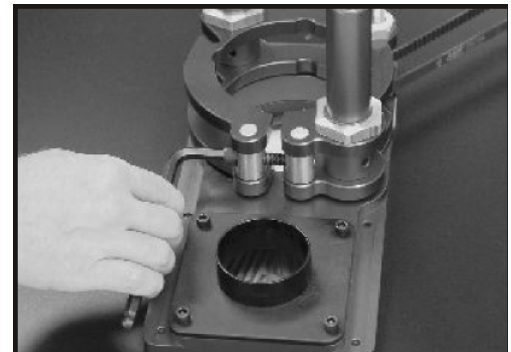


Figure 3

3. Slide the router motor into the carriage assembly and position it so the router slides all the way down into the center hole and the top of the router motor touches the bottom of the center hole retainer ring (Fig. 4)
4. Rotate the motor so that the on/off switch and variable speed adjustment switches are in your most desired position relative to being able to access them from the front, side or rear of the router table, whichever you prefer.
5. Retighten the cap screw you loosened in step 3 to secure the motor housing (Fig. 3).

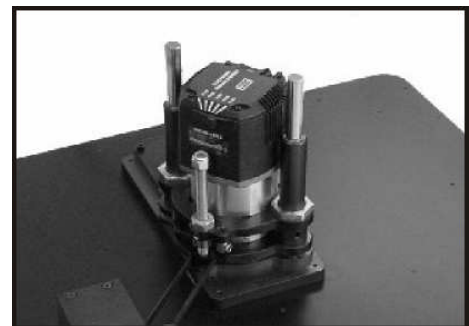


Figure 4

## **MOUNTING THE EXCEL TO THE JESSEM ROUT-R-TABLE STAND**

If you are mounting the Mast-R-Lift Excel to our Rout-R-Table Stand you will notice the underside of the Excel Table Top is pre-drilled to fit our Stand. There are separate instructions for the stand assembly included with the Rout-R-Table Stand #05001A.

You will also find it easier if you assemble the stand separately and then attach to the Excel tabletop with the Excel unit resting upside down (Fig. 5).



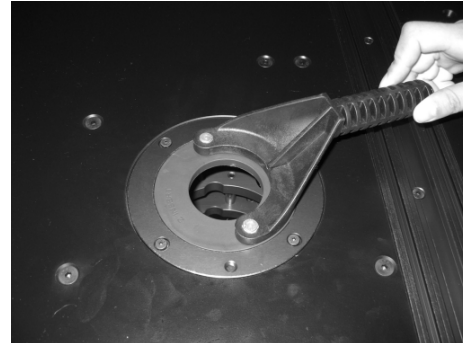
**Figure 5**

## **THE VACCUUM PORT**

The Mast-R-Lift Excel offers an integral dust collection chamber lift housing. The dust port adapter on the unit will accept a 2-1/4" standard shop vac fitting in the inside diameter or a 2- 1/2" dust hose around the outside diameter. There is also a 4" diameter available separately.

## **TAB-LOC INSERT RINGS**

The Mast-R-Lift Excel comes with one insert ring with a pre-drilled 2" diameter center hole. Additional ring sets are available with different diameter pre-drilled holes and/or no pre-drilled holes for creating your own custom center hole diameters. See your JessEm distributor for these and other accessories.



**Figure 6**

1. Place the insert ring into the center hole of the table top (Fig. 6).
2. With the insert wrench provided, insert the prongs of the wrench into the corresponding holes in the insert ring and turn the insert ring counter clockwise to tighten.
3. Turn the insert wrench clockwise to loosen and remove the ring. If the insert ring becomes too tight to loosen with hand pressure, a tap clockwise on the insert wrench with a block of wood will loosen it.

## Using the Micro-Dial Feature

The Mast-R-Lift Excel features a Micro-Dial which when rotated has no effect on the height adjustment of the lift. The dial is used as a zero reference point to make micro-adjustments to the cutting height. Turn the dial so that the zero is lined up with the mark at 12 o'clock and then turn the crank handle as the dial reveals the desired amount of change to make to the cutting height. Refer to the chart below for fractional and decimal adjustments based on amount of revolutions made.

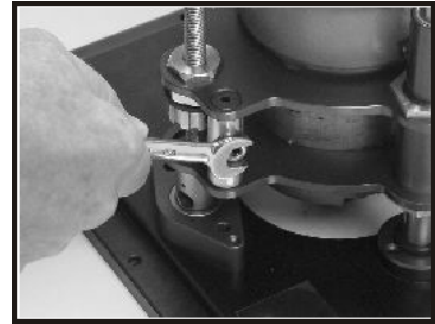


Figure 7

<u>Fraction</u>	<u>Decimal</u>	<u>Number of Revolutions</u>
1/64"	0.016"	1/4
1/32"	0.031"	1/2
1/16"	0.062"	1 Revolution
1/8"	0.125"	2
1/4"	0.250"	4
1/2"	0.500"	8

## Re-Adjusting the Thread Tensioning

All JessEm Lifts feature our patented thread tensioning design. This feature is why it is not necessary to lock the router into position after setting the cutting height. The design keeps tension on the position wherever you set the height. Thread tension is set at the factory and depending on the amount of use you may have to reset this adjustment periodically. If the bit height ever begins to change (or drop) during use, the thread tensioning likely needs to be reset.

1. Turn the Lift upside down on a table with the threaded height adjustment rod facing you.
2. With an open end wrench, (Fig. 7) loosen the hex nut that is located on the right side of the brass post next to the threaded rod. Then use a hex wrench to back out the set screw that threads through the nut until the brass tensioning collar can be turned.

3. Then route the brass tensioning collar (Fig. 8) with vertical grooves, so it tightens against the rubber washer. Note: A drop of oil on the rubber washer eases the rotation of the brass collar.

4. Make certain the set screw seats in one of the vertical grooves when tightening the brass collar.

5. Tighten the nylon lock nut with the open end wrench again and the adjustment is complete.

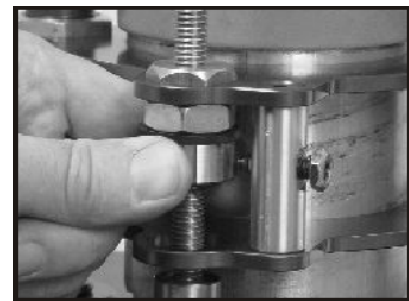


Figure 8

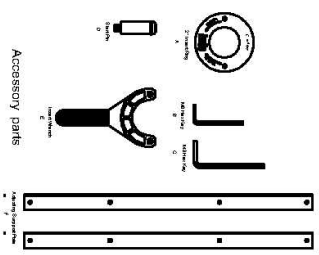
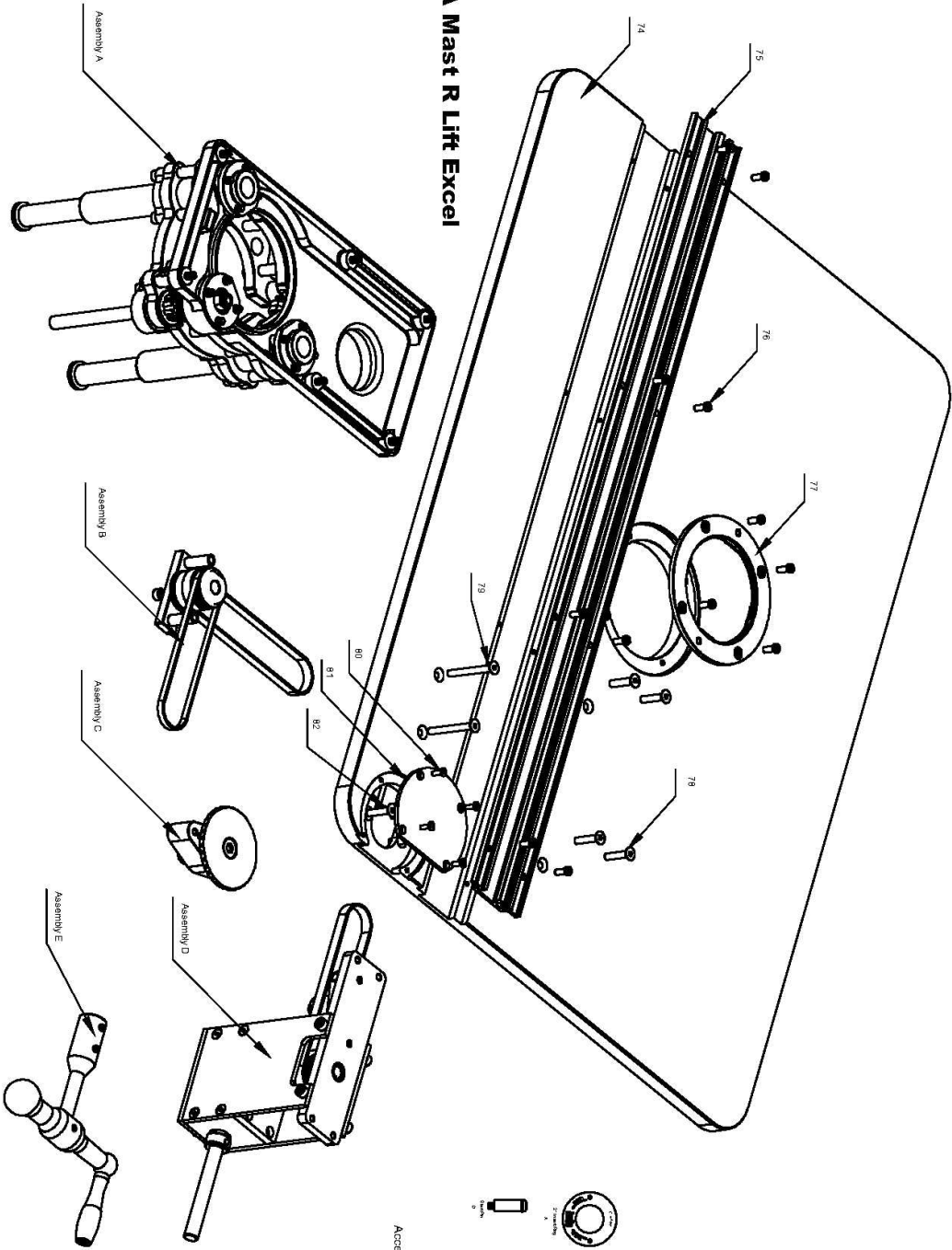
## 02201A Mast-R-Lift Excel Parts List

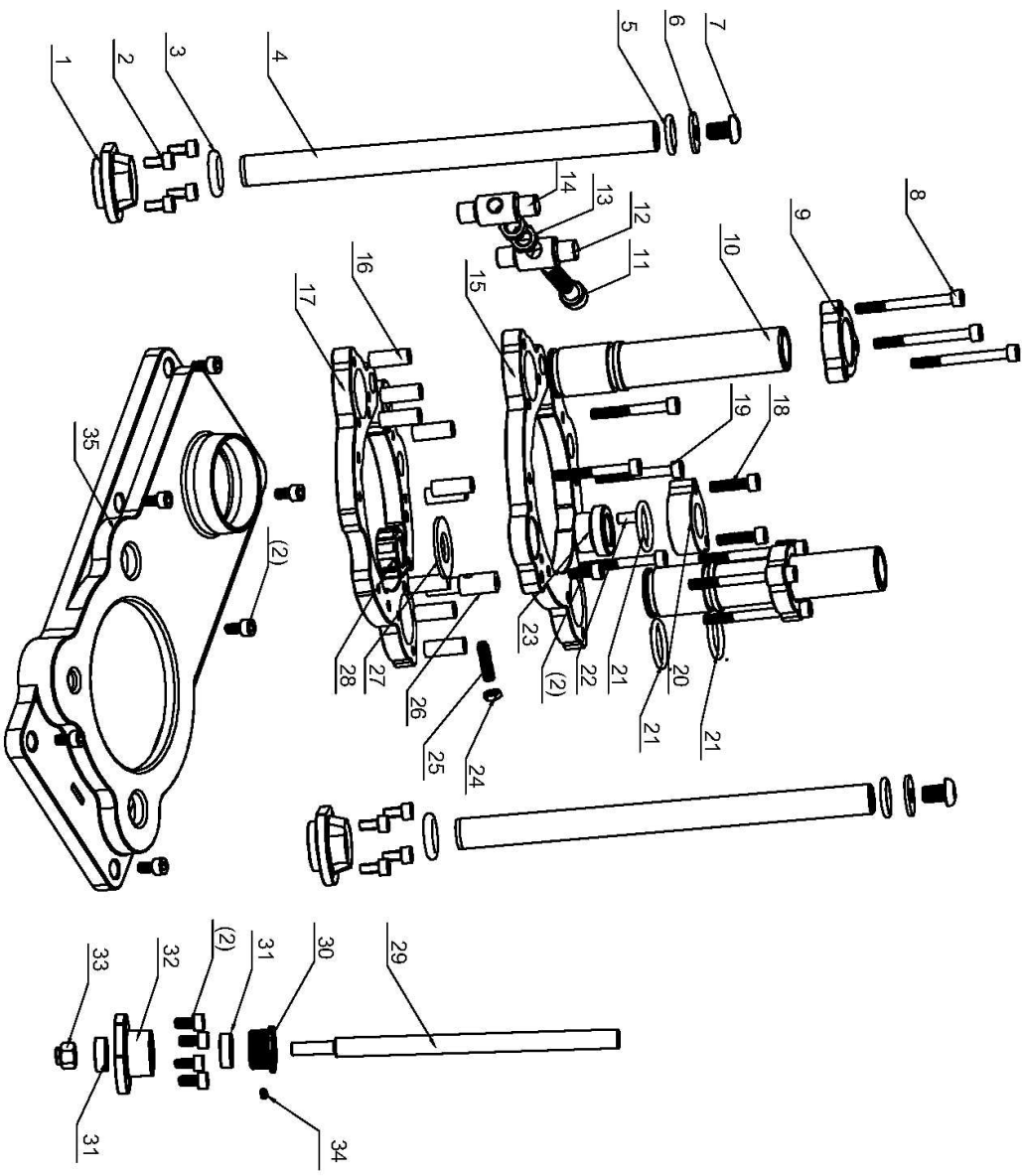
View No.	Part No.	Description	Qty	Specification
1	02201A-001	Guide Tube Base	2	
2	02201A-002	Shaft MTG Block Bolt	26	M6X12
3	02201A-003	Rubber O-Ring	2	29.4X18.6X5.4mm
4	02201A-004	Bearing Tube	2	
5	02201A-005	Rubber O-Ring	2	25.4X18.6X3.4mm
6	02201A-006	Washer	2	8.5X25X2.5mm
7	02201A-007	Screw	2	M8X16
8	02201A-008	Carriage Bolt Long	6	M6X64
9	02201A-009	Carriage Tube Retainer	2	
10	02201A-010	Guide Tube	2	
11	02201A-011	Carriage Lock Bolt	1	M10X60
12	02201A-012	Clamp pin	1	
13	02201A-013	Carriage Adjusting Lock Nut	2	M10
14	02201A-014	Clamp pin	1	
15	02201A-015	Upper carriage plate	1	
16	02201A-016	Carriage Spacer	10	
17	02201A-017	Down Carriage Plate	1	
18	02201A-018	Retainer Bolt	2	M6X25
19	02201A-019	Carriage Bolt Short	4	M6X50
20	02201A-020	Retainer	1	
21	02201A-021	Rubber O-Ring	3	32X25.2X3.4
22	02201A-022	Pin	1	
23	02201A-023	Shaft Bushing	1	
24	02201A-024	Backlash Lock Nut	1	M6
25	02201A-025	Backlash Set Screw	1	M6X25
26	02201A-026	Backlash Pin	1	
27	02201A-027	Rubber Washer	1	
28	02201A-028	Brass Backlash Nut	1	
29	02201A-029	Lead ScrewW/Spring Pin	1	
30	02201A-030	XL16 Pulley	1	
31	02201A-031	Bearing	2	
32	02201A-032	Spindle Mounting Block	1	
33	02201A-033	Nylon Nut	1	M8
34	02201A-034	Set Screw	5	M4X6
35	02201A-035	Excel Shaft Mount lift	1	
36	02201A-036	Pulley Mounting Block	1	
37	02201A-037	Pulley Mounting Shaft	1	
38	02201A-038	Excel Dial 20XL Pulley	4	
39	02201A-039	Spacer	2	
40	02201A-040	Excel Pulley Spacer	1	
41	02201A-041	Belt	1	
42	02201A-042	Copper Washer	1	
43	02201A-043	Belt	1	



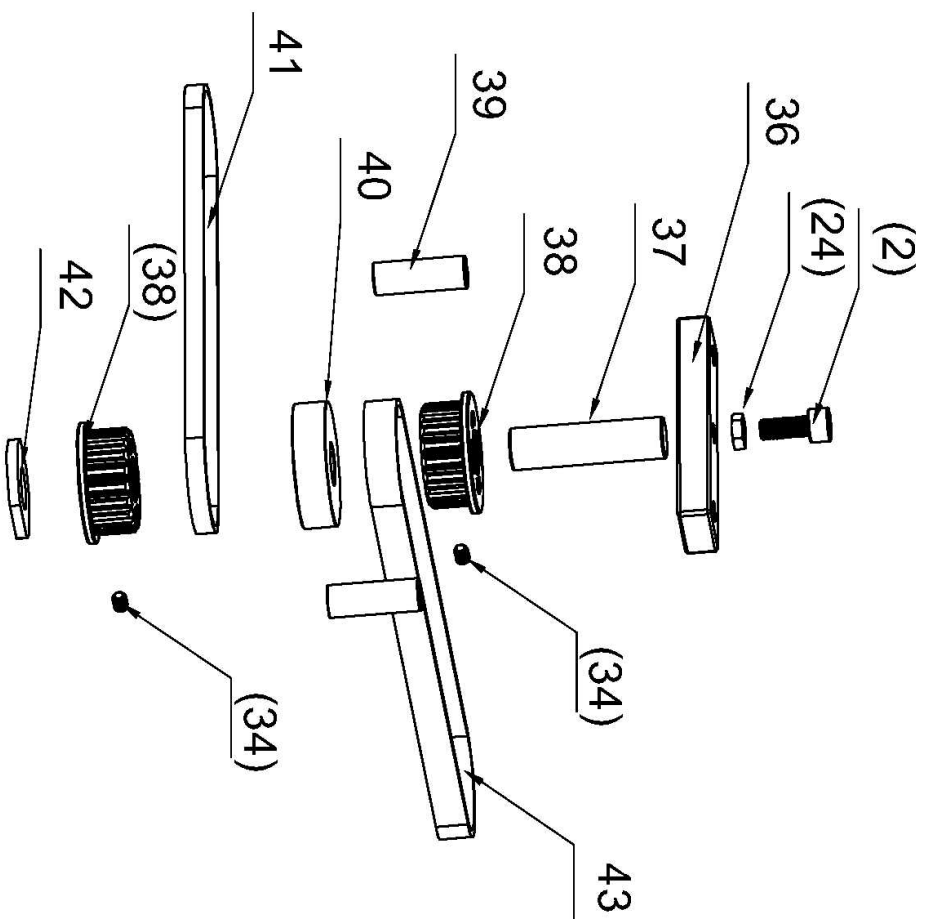
44	02201A-044	Excel Dial Pin	1	
45	02201A-045	Excel Dial	1	
46	02201A-046	Bearing	2	
47	02201A-047	Excel Dial 20XL Pulley	1	
48	02201A-048	Washer	1	
49	02201A-049	Excel Dial Mounting	1	
50	02201A-050	Nylon Nut	1	M12
51	02201A-051	Rubber O- Ring	2	
52	02201A-052	Screw	1	M3X6
53	02201A-053	Bear Box Cover Plate	1	
54	02201A-054	Right Side Gear Box	1	
55	02201A-055	Screw	8	M5X8
56	02201A-056	Excel Miter Gear	2	
57	02201A-057	Gear Box Shaft Collar	3	
58	02201A-058	2-1/4" Gear Box Bearing Mount	2	
59	02201A-059	Gear Box Shaft Long	1	
60	02201A-060	Set Screw	5	M6X6
61	02201A-061	Gear Box Shaft Short	1	
62	02201A-062	Gear Box Middle Plate	1	
63	02201A-063	Belt	1	
64	02201A-064	Gear Box Mount	1	
65	02201A-065	Left Side Gear Box	1	
66	02201A-066	Bolt	1	M6
67	02201A-067	Excel Idler Pulley	1	
68	02201A-068	Bolt	2	M6X20
69	02201A-069	Idler Pulley Mount	1	
70	02201A-070	Excel Handle Extension	1	
71	02201A-071	Crank Handle Body	1	
72	02201A-072	Crank Handle Knob	1	
73	02201A-073	Bolt	1	M6X83
74	02201A-074	Excel Table Top	1	800X600mm
75	02201A-075	Table Insert Plate	1	
76	02201A-076	Screw	12	
77	02201A-077	Insert Mounting Ring	1	
78	02201A-078	Screw	4	M6X25
79	02201A-079	Screw	2	M6X50
80	02201A-080	Screw	4	M4X8
81	02201A-081	Dial Cover	1	
82	02201A-082	Screw	2	M6X20
A	02201A-A	2" Insert Ring	1	
B	02201A-B	Hex Key	1	3X3.4
C	02201A-C	Hex Key	1	8X8.9
D	02201A-D	Starter Pin	1	
E	02201A-E	Insert Wrench	1	
F	02202A-F	Adjusting Support Plate	2	

# 02201A Mast R Lift Excel

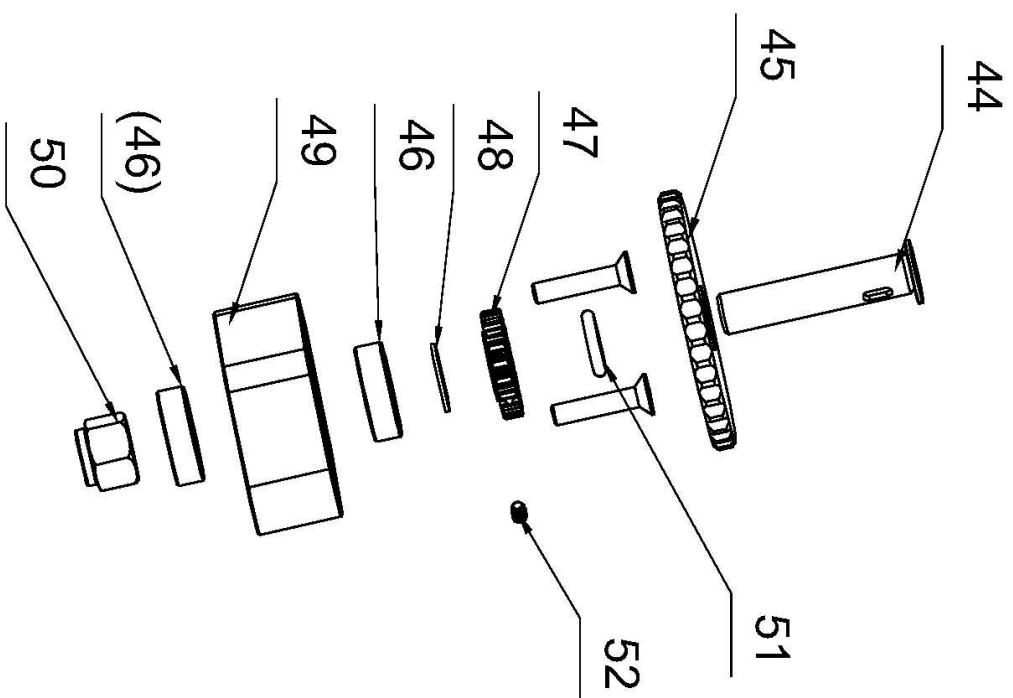




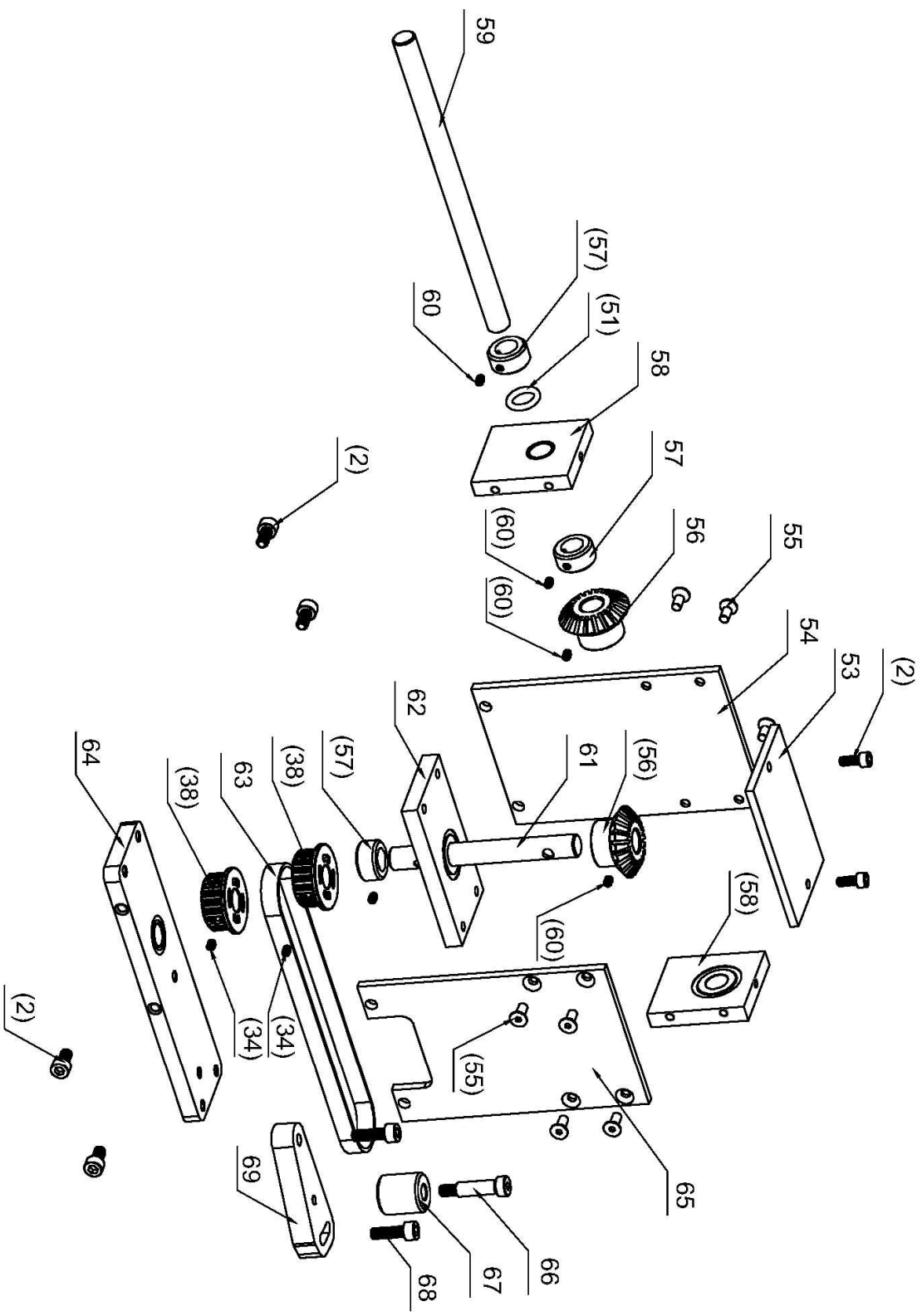
**Assembly A**



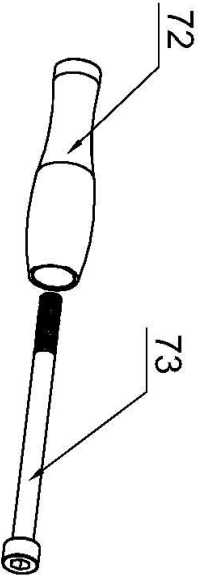
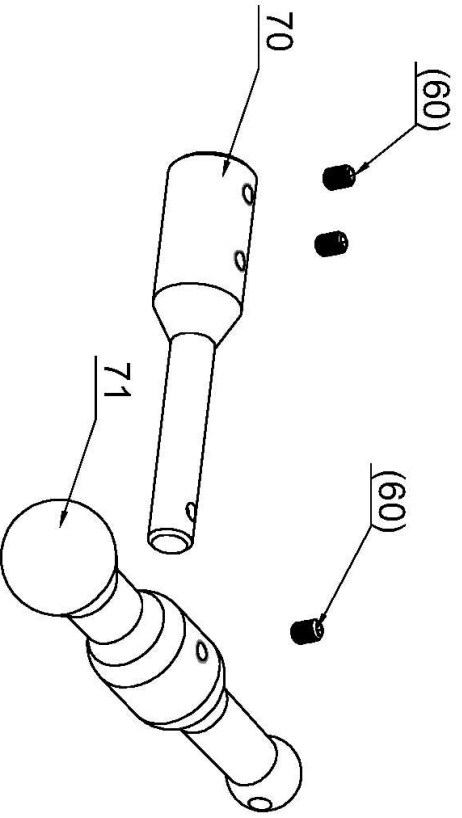
# Assembly B



## Assembly C



**Assembly D**



**Assembly E**

