

Powerfeeder Operating Instruction



For your safety, please read Operating Instruction before operating the machine.

● IMPORTANT SAFETY RULES

WARNING: Failure to follow these rules may result in serious personal injury.

Woodworking can be dangerous if safe and proper operation procedures are not followed. Using the tool with respect and caution will considerably lessen the possibility of accident. Always follow rules. Use common sense and exercise caution in the workshop. Remember: your personal safety is your responsibility.

1. READ OPERATION MANUAL. Keep and protect it near the machine for easy access in the event of future review.
2. IMPORTANT PERSONAL SAFETY NOTE.
Wear goggles – eyes protection.
Wear dust masks – respiratory protection.
Wear earpieces – hearing protection.
Wear proper apparel – no loose clothing, gloves, neckties, and jewelry.
No drugs, alcohol, medication – Do not operate under such influence.
3. DON'T USE TOOL IN DANGEROUS ENVIRONMENT. Keep work area well ventilated and lighted, avoid damp or wet location. Room temperatures $-10\sim+40^{\circ}\text{C}$, Humidity $30\sim95\%\text{RH}$, Altitude $\leq 1000\text{M}$, Voltage deviation $\pm 5\%$.
4. KEEP WORK TABLE AND AREA CLEAN. Loose hand tools left on table or cluttered work area invite accidents.
5. KEEP UP THE MAINTENANCE. Follow operation manual for proper operation and maintenance.
6. DISCONNECT TOOL FROM POWER SOURCE. Before any tooling change, repairing or regular maintenance.
7. FINAL INSPECTION AFTER EACH MAINTENANCE OR REPAIRING. Make sure all parts are properly mounted, tightened, and aligned before next operation.
8. AVOID UNINTENTIONAL STARTING. Make sure switch is on "OFF" position before power reconnection.
9. KEEP WORK SHOP CHILDPROOF. Use padlocks, master switches or remove starter keys. Prevent children or unauthorized personal from tampering. All visitors should be kept at a safe distance from work area.
10. NEVER LEAVE TOOL RUNNING UNATTENDED. Turn power off. Don't leave until it comes to a complete stop.

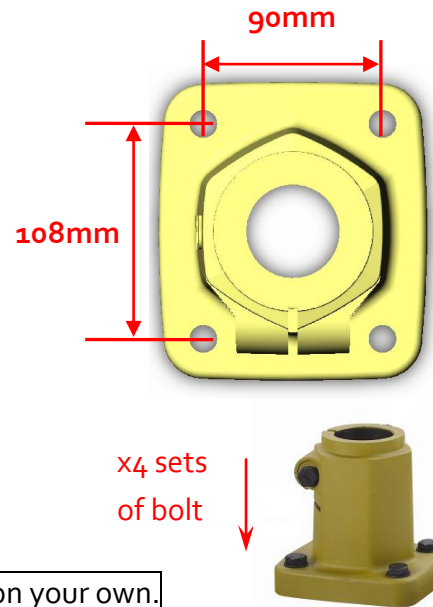
● ADDITIONAL SAFETY RULES FOR POWERFEEDER

1. Cutting tools MUST be rotating before feeding.
2. DO NOT overload the cutting tool by feeding too fast.
3. ALWAYS KEEP hands away from rotating parts.
4. PROVIDE support for long stock on out feed end of table.
5. STOP the feeder before stopping the cutting tool.
6. DISCONNECT power before making repairs or adjustment.

● LOCATE MOUNTING AND BORING POSITION

Suggested position at the outfeed rear end of the tabletop.

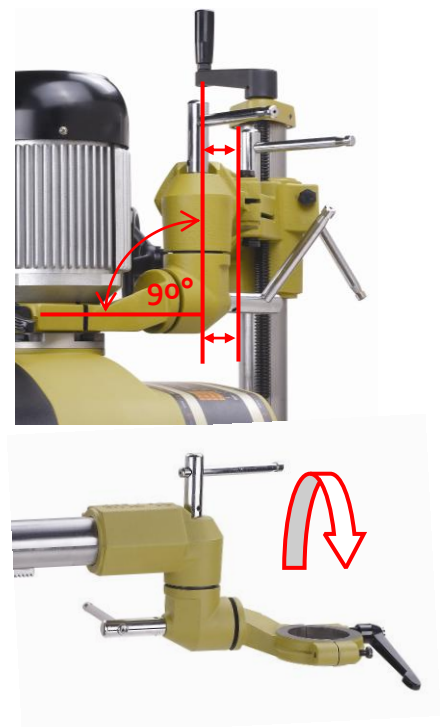
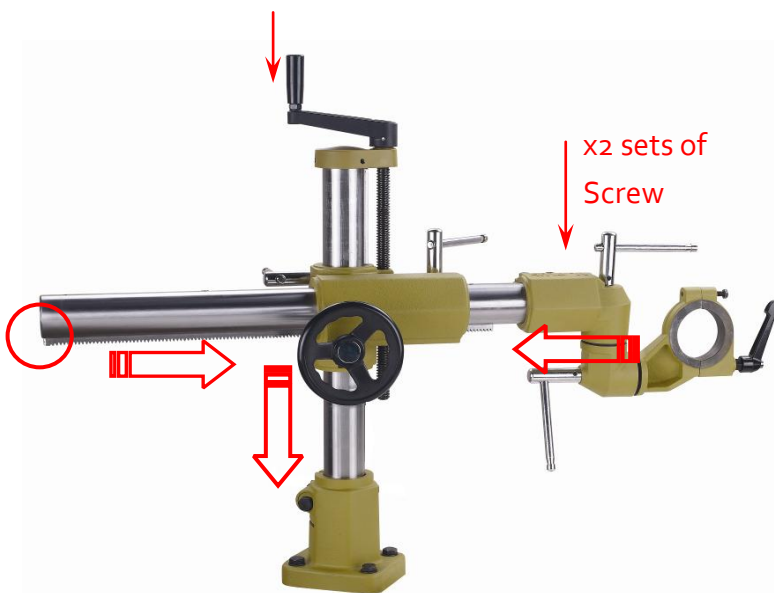
1. Center punch 4 boring positions 90x108mm. (Avoid table ribs and support underneath the table.)
2. Drill $\phi 10.3\sim 10.5\text{mm}$ & tap M12-P1.75.
3. Using 4 sets of bolts, M12x50mm, & spring washers (provided,) mount the Base on tabletop.



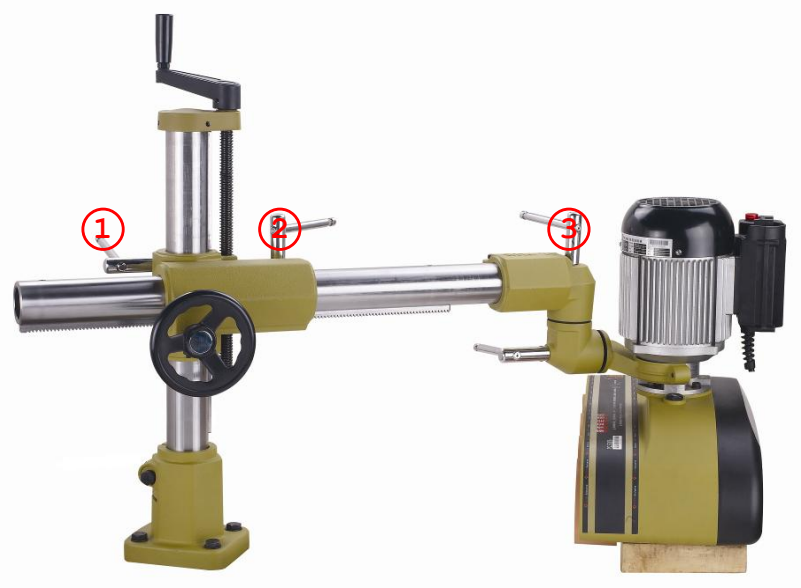
● ASSEMBLING

WARNING: Get help! Feeder is heavy; do not try to do it on your own.

1. Fasten Base to table. Insert Elevating Column Assb. to Base, assemble Grip.
2. Insert Extension Column into Cross Bracket. Turn Handwheel a few turns, tighten Lever.
3. Assemble the Universal Joint to the end of Extension Column. Make sure of its vertical parallel with the Elevating Column, and semi-tighten the 2 Screws. Remarks: the parallelism relates to feeding roller alignment.
4. Adjust Motor Clamp to the left; make sure it is parallel to table top, which relates to feeding roller alignment.
5. Reposition Motor 270° by loosen 4 Screws let Switch position in the front.



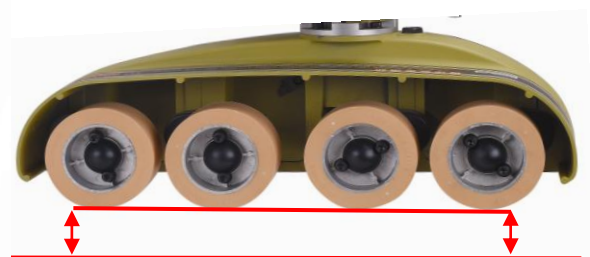
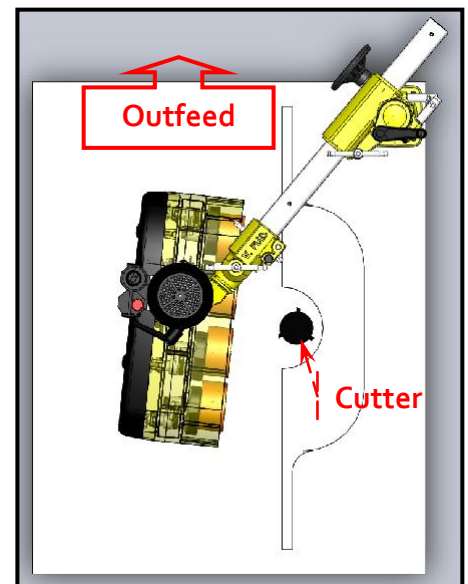
6. Remove outer-half Motor Clamp, place feeder housing to the inner-half Motor Clamp and assemble the outer-half Motor Clamp. The parallelism between Motor Clamp open sides and feeder housing relates to top-side feeding conversion. Make the same open-space between 2 half Motor Clamp will be convenient for feeder housing horizontal rotation.



● FEEDING POSITION & ROLLER PARALLELISM ADJUSTMENT

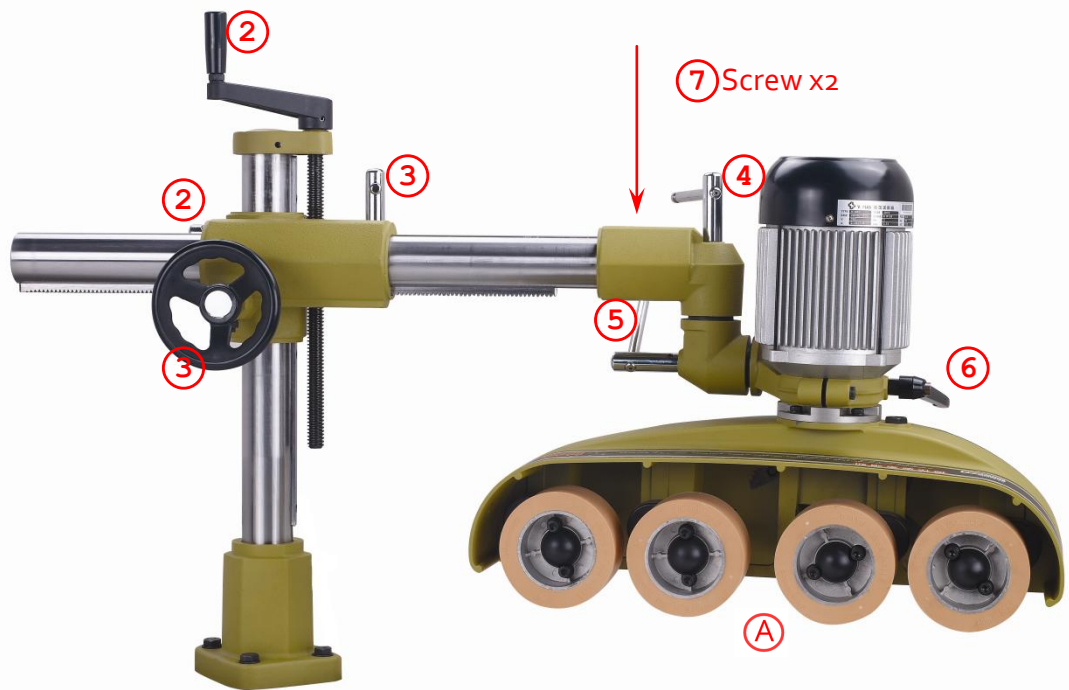
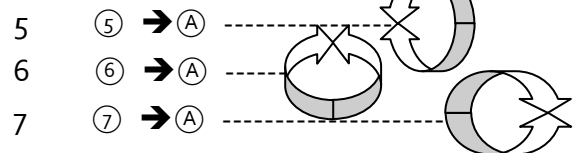
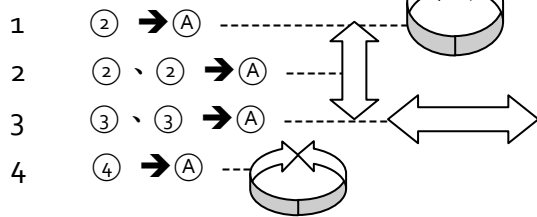
1. Loosen all Levers ①、②、③, move feeder housing and make it right in front of the cutter and parallel to the fence. Adjust feeding angle with outfeed end slightly against the fence. Tighten all Levers ①、②、③, and Handle.
2. Low down feeder housing let rollers slightly touch table top to adjust roller parallelism.
 - 2.1. Adjust horizontal of the Motor Clamp for infeed end and outfeed end parallelism.
 - 2.2. Adjust angle of the Swivel Bracket for rear side and front side parallelism.

Remark: Roller alignment slightly off is acceptable, offset by independent suspension.



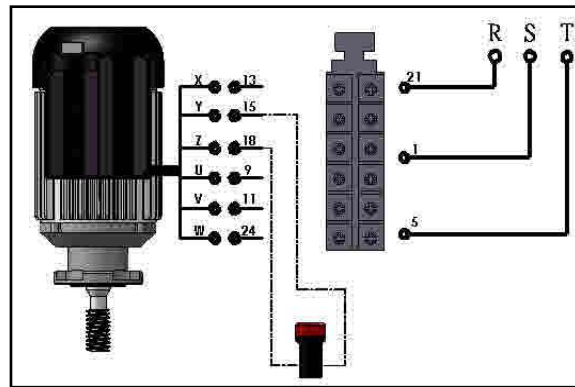
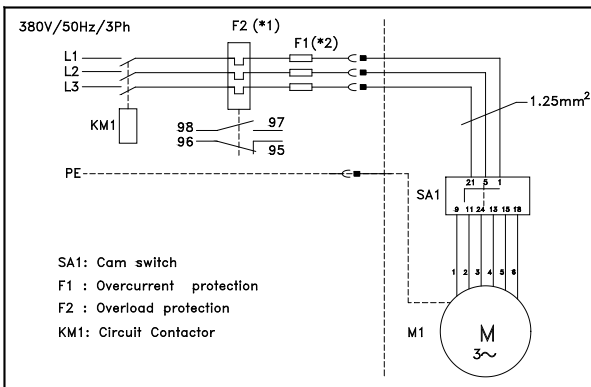
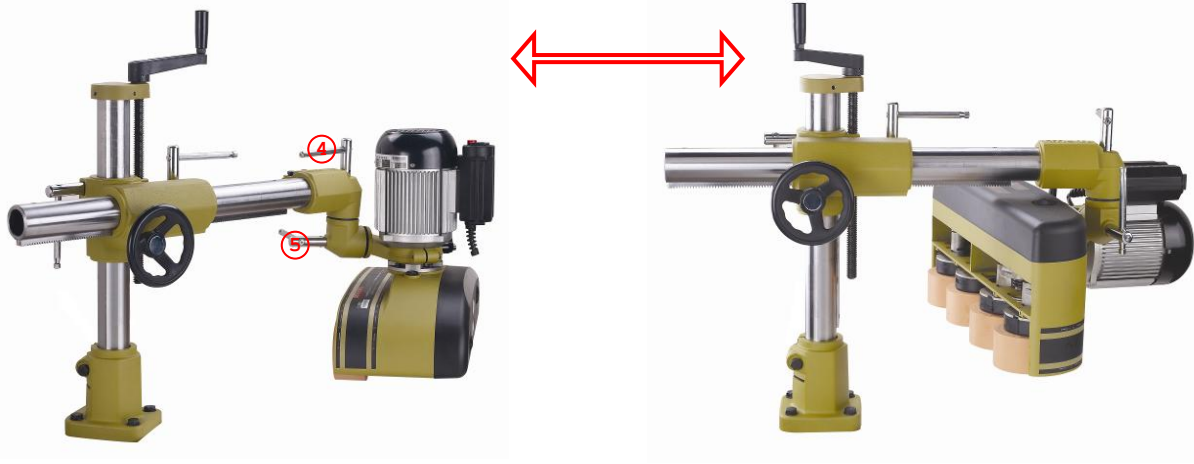
3. Make sure all Levers, Screws and Handles are tightened.
4. **Important:** There is certain play between Elevating Key and Bracket Groove designed for easy elevation. Pull feeder housing against infeed direction and tighten all levers to offset the play and ensure sturdy feeding.

● **ADJUSTMENT AND CONTROL**



● **TOP TO SIDE FEEDING CONVERSION**

1. Swing feeder housing off the tabletop area. (Weight balance between feeder and the machine must be considered.) Loosen Lever 5, left-turn feeder housing 90° to floor with roller on right and motor on left, tighten Lever 5. Loosen Pull Handle on Motor Clamp, turn feeder housing 90° with Switch Box facing up and roller facing down, and tighten Pull Handle.
2. Loosen Lever 4, push feeder housing to desired position. Secure all Levers, Screws and Handles.



● POWER CONNECTION AND GROUNDING

WARNING: Make sure electric currency matches the motor specification.

WARNING: Make sure switch is on the "OFF" position.

CE REQUIRED COUNTRIES:

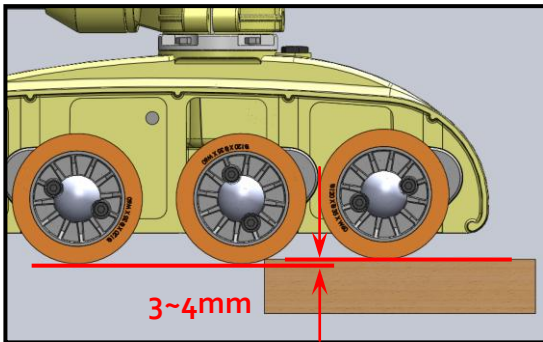
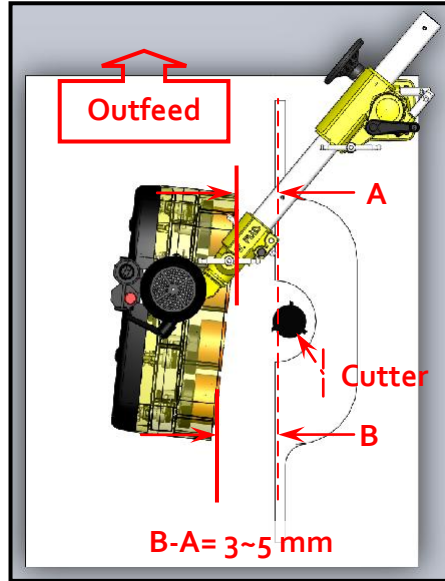
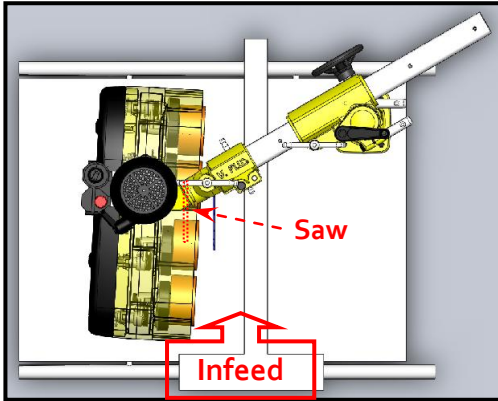
1. Feeder is a supplemental tool, which works in conjunction with your shaper, table saw, jointer, ... etc. It's recommended to be used with a machine that is wired in compliance with your national or local electrical regulation.
2. It must be connected to your machine through a specially designed current taps that ensures your machine's switch and emergency stop having controls of your feeder's power source. In addition, the current tap must provides an overload and under voltage protection systems.
3. Rated Current: 2.5Amp.
4. Electrical connection is reserved for certified electrician only.

OTHER COUNTRIES:

1. A separate electrical outlet should be used for your feeder. The circuit should not be less than # 12. Wire properly installed and grounded in accordance with your local codes and ordinances, protected with a 15 Amp time lag fuse or circuit breaker.

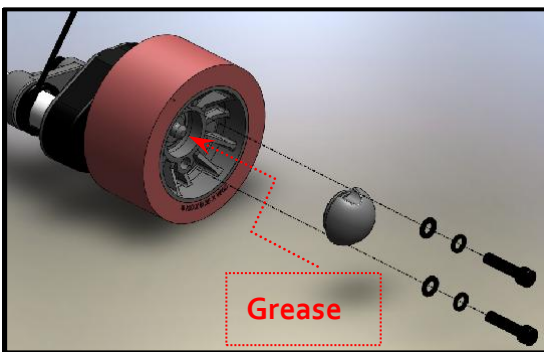
2. If an extension cord is used; $\leq 30\text{M}$ (100Ft), use #12 Wire; $\geq 46\text{M}$ (150Ft), use #10 Wire.
3. Ensure all line connections make good contact. Low voltage running will damage the motor.
4. Properly ground the motor to reduce the risk of electrical shock. The motor is equipped with a grounding conductor (green wire with or without yellow stripes.)
5. If unsure, consult with a qualified electrician.

● USING POWERFEEDER ON MACHINES



● ROLLER REPLACEMENT

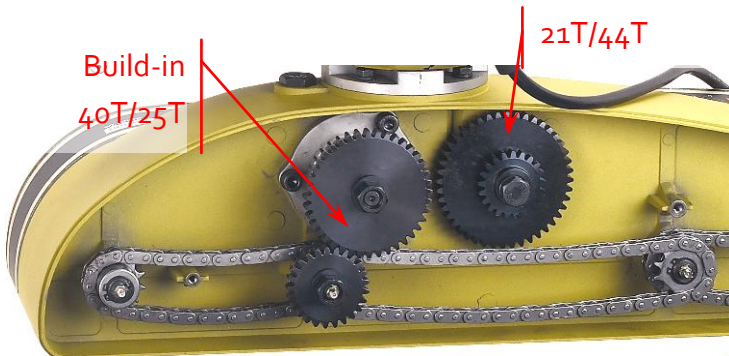
WARNING: Disconnect feeder from power source.



● FEED RATE SETTING

WARNING: Disconnect feeder from power source.

Setting the available feed rate is a combination of motor speeds (pole change by switch, forward or reverse) & gear settings (build in 40T/25T, equipped with 21T/44T,) total 8 speeds. Feed rate chart is shown on roller cover at the infeed end.



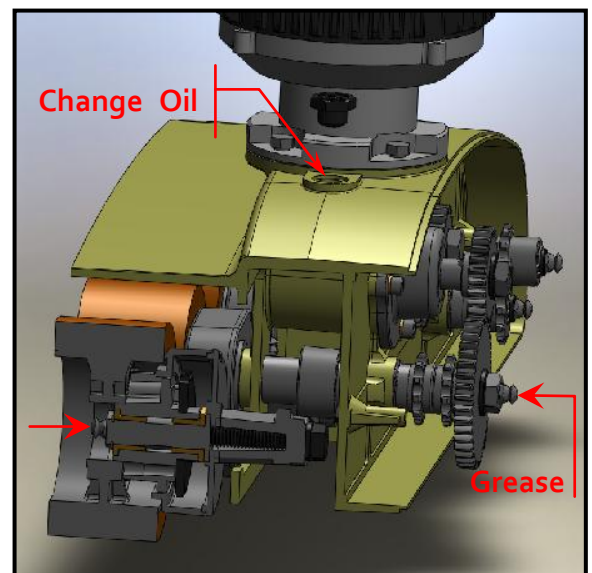
● LUBRICATION & MAINTENANCE

WARNING: Disconnect feeder from power source.

Change oil first 200 hrs (30 days,) and change oil every 1000 hrs (6 months.) Recommended Gear Oil: MOBIL Mobilgear 630, Shell/Omala 150 BP, Energol GR-XP 150, or equivalents.

Grease every 200 hrs (30 days) through fittings, using grease gun. Recommended Grease: # 2 GREASE. (Shell – Alvania Grease R2 or equivalents.)

Lubricate gears & chains periodically with grease. Recommended Grease: # 2 GREASE. (Shell – Alvania Grease R2 or equivalents.)



Remove working-waste (saw dust, shavings, etc) from the feeder by air gun after each use.

INVERTER OPERATION MANUAL




1、 Description of Inverter keyboard



2、 Indicator Function

Item		Description	Color
Hz	On	Frequency	Green
RUN	On	Inverter is working	Green
	Off	Inverter stopped	
TRIP	On	Error happened	Red
	Off	Inverter is working	
M/Min		Speed per minute	Green

3、 Button Function

Item	Function	
	Rotation	Rotate this key clockwise to speed up
		Rotate this key counterclockwise to speed up
	Press down	Press this key down to shift between Reverse and Forward
	Press down 5 Seconds	1-----Program for 1 roller Inverter
2-----Program for 3 and 4 roller Inverter		
3-----Program for 8 roller Inverter		
	Run	Press this key to start the machine
	Stop/Reset	Press this key to stop the machine
		Reset the Inerter when error happened

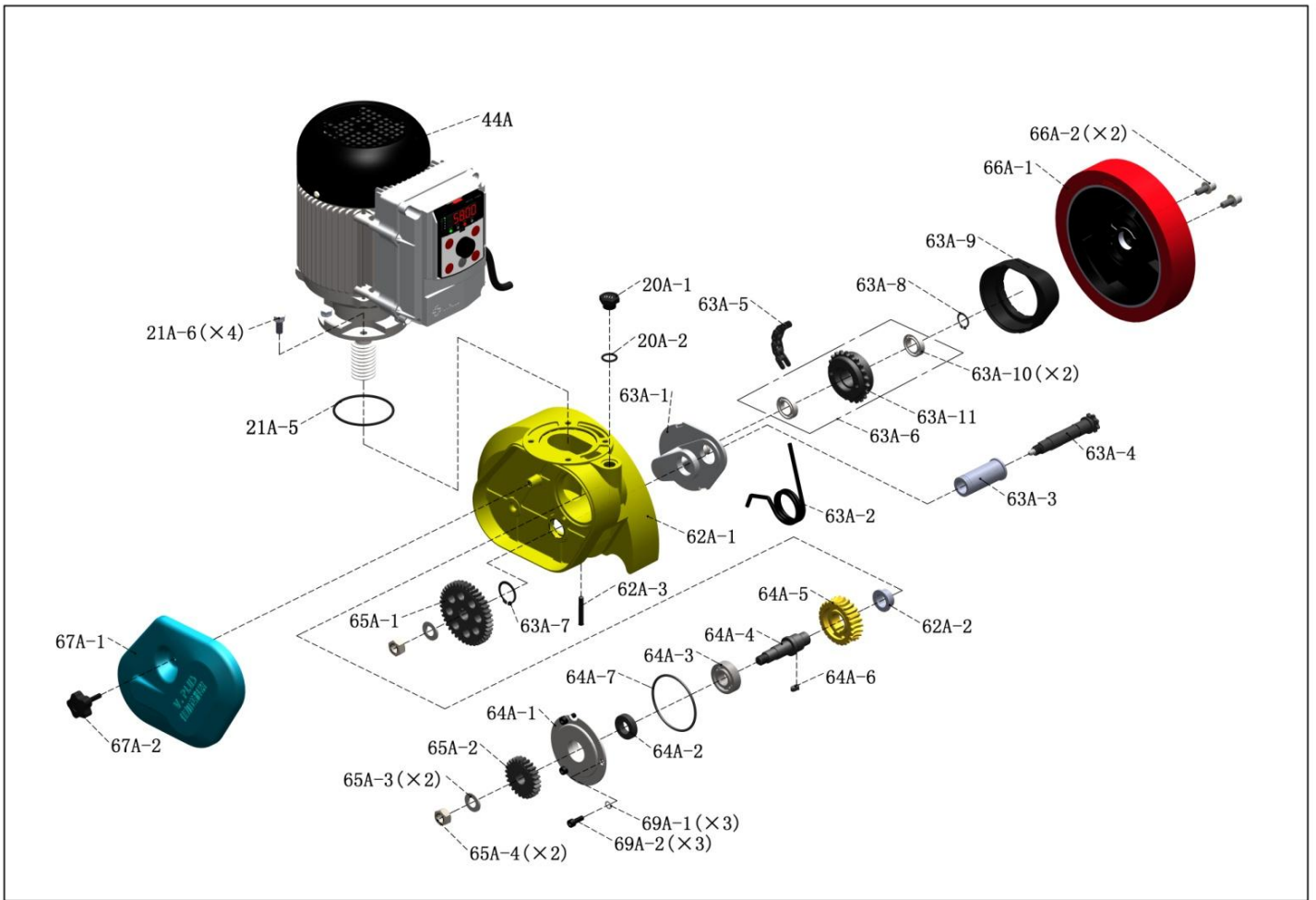
● SERVICE AND TROUBLESHOOTING

#.	TROUBLE	PROBABLE CAUSE	SOLUTION
1.	Jammed workpiece	Rollers too low.	Raise feeder.
2.	Uneven forwarding speed.	Rollers too high, no traction.	Lower feeder.
	Occational jammed workpiece.	Relatively thicker piece in the pile.	Put aside the thicker pieces, re-adjust the height afterwards.
4.	Occational slip or uneven forwarding speed.	Relatively thinner piece in the pile.	Push it out by using the next piece, put aside the thinner pieces, re-adjust the height afterwards.
5.	Side feeding.		Refer to manuel on top to side feeding conversion.
6.	Uneven cut or finish.	Insufficient roller pressure.	Lower feeder.
7.	Uneven cut or finish.	Insufficient angle of feeding direction against fence.	Infeed-end (housing) must be 3-5mm further (away) from fence than outfeed-end.
8.	Rough finish.	Hight moisture contain.	
9.	Infeed speed varies from outfeed speed.	Rollers may not be evenly paralleled to table.	Re-adjust position.
10.	Rought or burned cuts.	Feeding too fast.	Adjust feed rate.
11.	Rought or burned cuts.	Dull cutter.	Change or sharpen cutter.
12.	Workpiece not moving straight forward and against fence.	Incorrect angle of feeding direction against fence.	Infeed-end (housing) must be 3-5mm further (away) from fence than outfeed-end.
13.	Uneven feeding speed still, after all porper adjusment,	May occur on certain type of materials.	Apply softer roller (higher friction) or pushing it forward with the next workpiece.
14.	improper processing sound ~1.	Feed too fast.	Adjust feed rate.
15.	improper processing sound ~2.	Dull cutter.	Change or sharpen cutter.

● 1-YEAR LIMITED WARRANTY

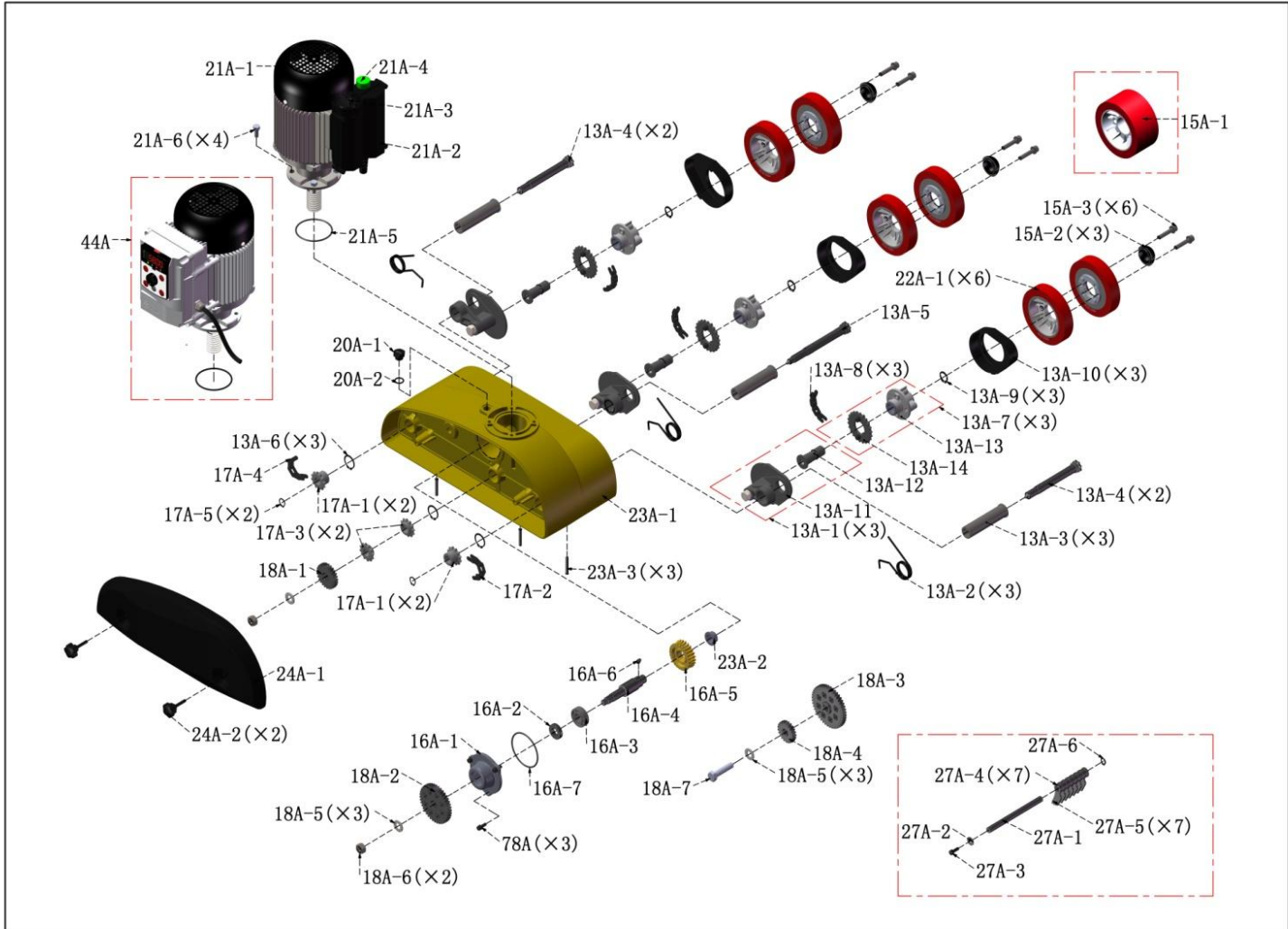
- 1 Manufacturer warrants its product free from any manufacturing defects, excluding rollers or belts which wear under normal usage.
- 2 Manufacturer is not liable for freight damages, power source damage, nor damages caused by improper use of machine and failure in keeping up with the recommended maintenance.
- 3 Warranty service with free replacement parts only. Bar code number must be presented for any warranty service.
- 4 Manufacture's Manufacturing Resume System (MRS) contains 2 sets of bar code, motor, feeder housing and stand.
 - 4.1 Motor bar code on motor specification plate, which is traceable to the Motor Pernformance Report (MPR) enclosed in feeder packaging.
 - 4.2 Housing bar code on outfeed end of roller cover and the packaging.
- 5 For any questionable parts, manufacturer or the dealer has the right requesting for return of the defected parts, freight collect; a claim form must be signed and attached to the parts.



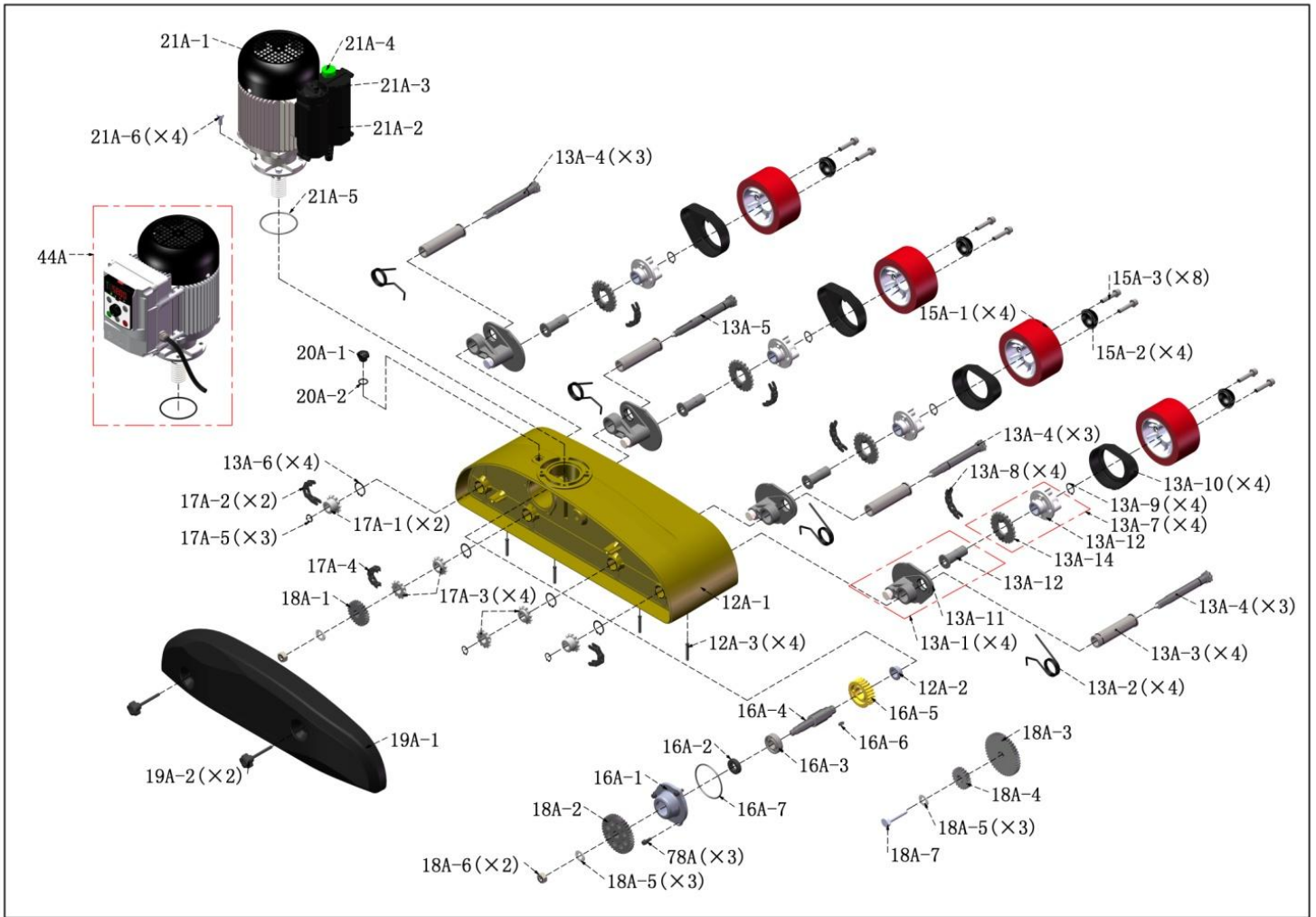


V-180

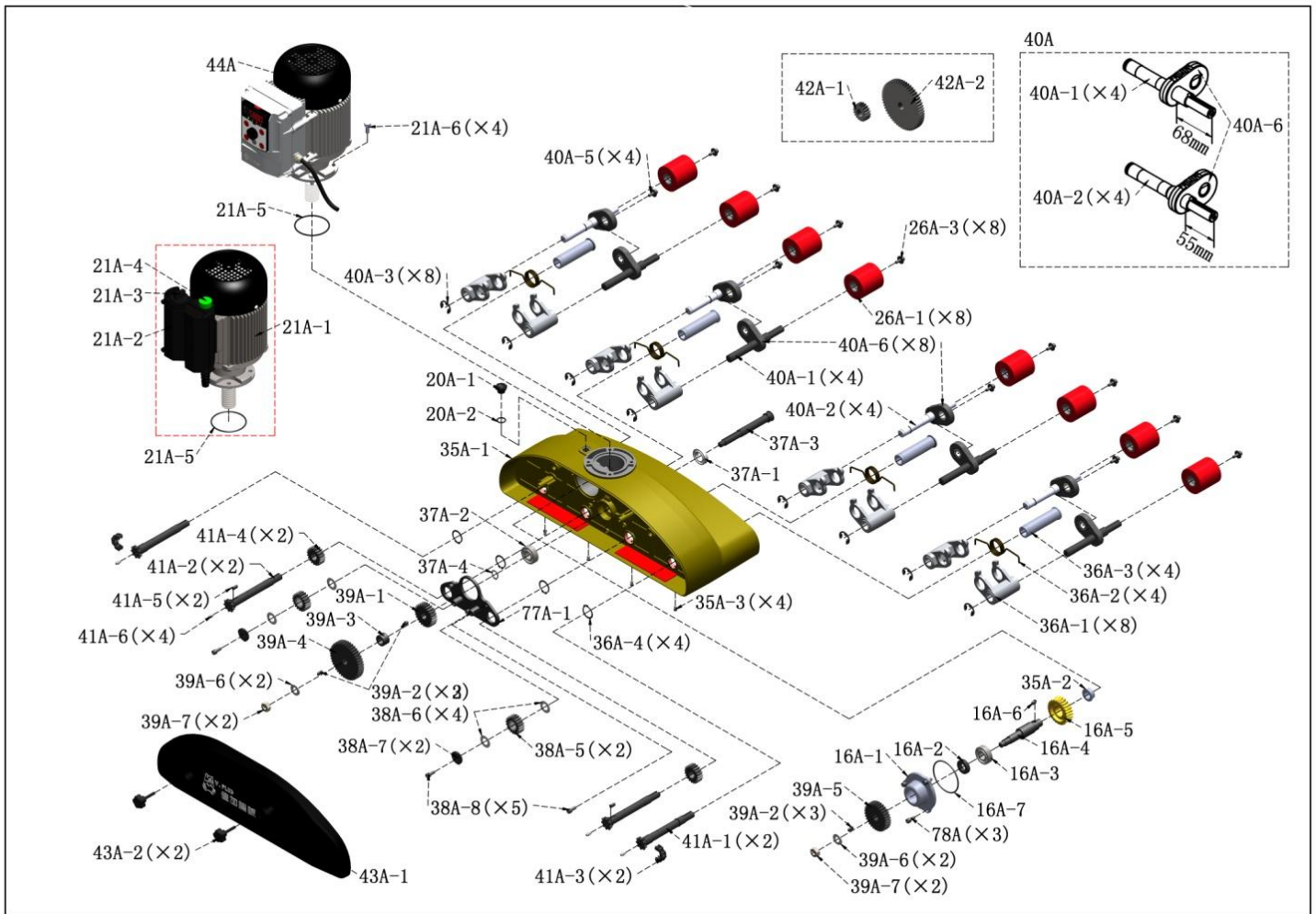
PART#	CODE#	Description	Q'TY	PART#	CODE#	Description	Q'TY
20A	X014	Oil Cap Kit	1	64A	X040	Worm Gear Assb.	1
20A-1	H01300210	Oil Cap	1	64A-1	E010212	Worm Gear Cover	1
20A-2	J030102	O Ring $\phi 20/\phi 2.65$	1	64A-2	J030201	Retain Seal 32X17X8t	1
21A-5	J030103	O Ring $\phi 75/\phi 3.1$	1	64A-3	V016203	Bearing 6203	1
21A-6	T02880820N	Hexagon Screw M8X20L	4	64A-4	A45300112	Worm Gear Shaft	1
44A	X01502	Inverter Motor 1PH/380V	1	64A-5	F030101	Crown Gear 24T	1
62A		Feeder Body Assb.	1	64A-6	W070612	Key 6X6X12L	1
62A-1	X045	Feeder Body	1	64A-7	J030101	O Ring $\phi 70/\phi 3.1$	1
62A-2	C420104	Sleeve $\phi 29 \times \phi 23 \times (9+3)$	1	65A	X180-4	Gear Set	1
62A-3	T05010640	Set Screw M6X40L	1	65A-1	C42024001	Gear 40T	1
63A		Transmission Sprocket	1	65A-2	C42022501	Gear 25T	1
63A-1	E010211	Sprocket Case Assb.	1	65A-3	U01011201N	Spring Washer M12	1
63A-2	D010101	Roller Hub Spring	1	65A-4	T201201	Hex Nut M12X10T-P1.75	1
63A-3	A200122	Tube 64mm	1	66A		Set of Roller $\phi 200 \times 40$	1
63A-4	X042	Driving Sprocket	1	66A-1	J010150	Roller $\phi 200 \times 40$	1
63A-5	S06260	Chain o6B-26S	1	66A-2	T01880830	Hexagon Screw M8X30L	2
63A-7	W020126	C Clip 26	1	67A		Housing Cover Kit	1
63A-8	W020117	C Clip 17	1	67A-1	E010192	Housing Cover AL	1
63A-9	H01300201	Sprocket Case Cover	1	67A-2	H01300305	Screw M6-P1X20L	1
63A-6	X039	Axle Bracket Assb.	1	69A-1	U030101	Spring Washer M6	3
63A-10	V046903ZZ	Bearing 6903	2	69A-2	T01880601	Hexagon Screw M6X16L	3
63A-11	A45301001	Axle Bracket Z=22	1	Different electricity available at extra charge			



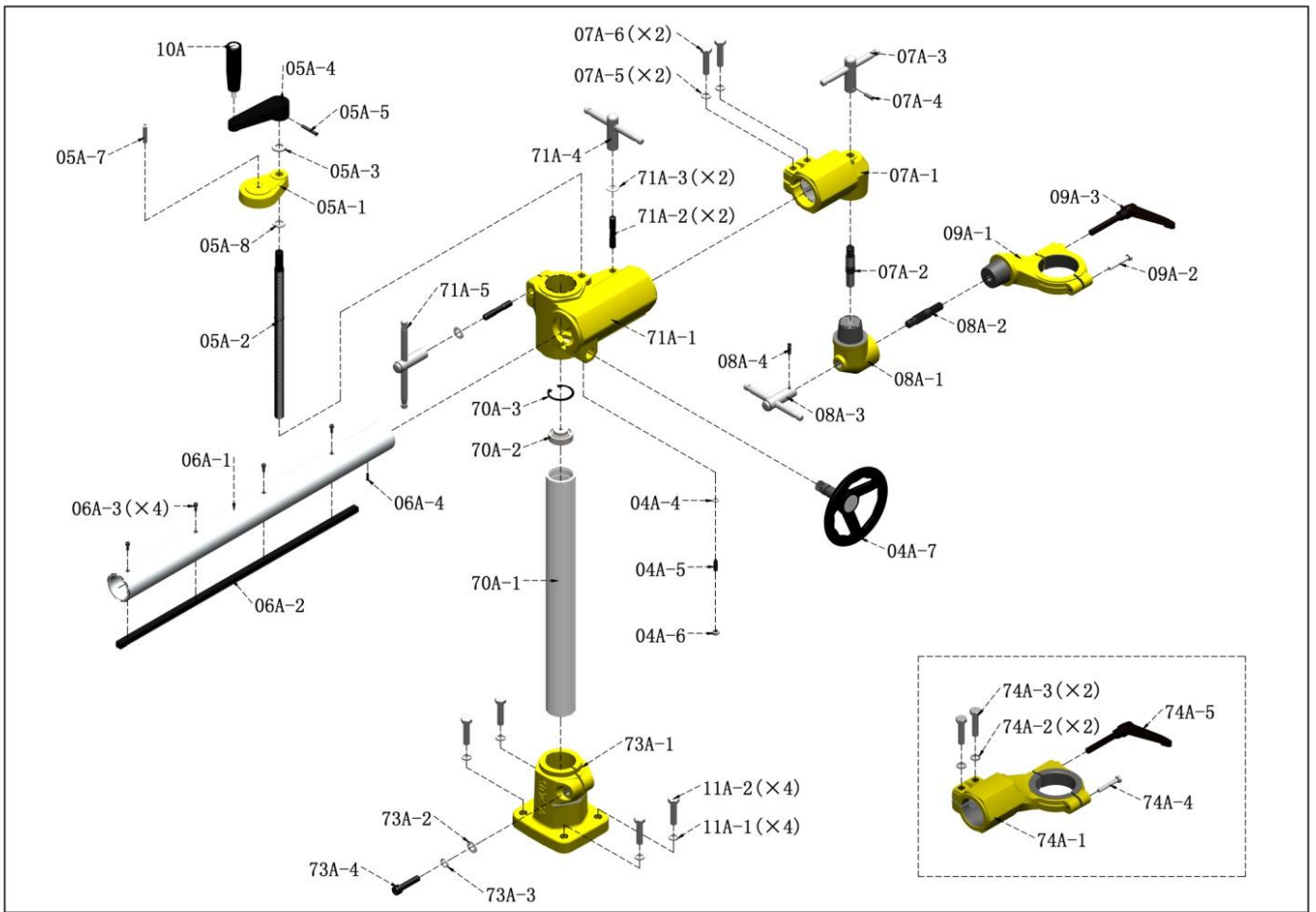
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PART#	CODE#	Description	Q'TY	PART#	CODE#	Description	Q'TY
12A		Feeder Body Assb.	1	17A		Sprocket Assb.	1
12A-1	X019	Feeder Body	1	17A-1	C420202	Sprocket Wheel S	2
12A-2	C420104	Sleeve $\phi 29 \times \phi 23 \times (9+3)$	1	17A-2	So6400	Chain o6B-40S	2
12A-3	To5010640	Set Screw M6X40L	4	17A-3	C420203	Joint Sprocket(Key)	4
13A		Transmission Sprocket	1	17A-4	So6620	Chain o6B-62S	1
13A-1	X008	Sprocket Case Assb.	4	17A-5	Wo20115	C Clip 15	3
13A-11	E010104	Sprocket Case	1	18A		Gear Set	2
13A-12	X008-1	Roller Shaft	4	18A-1	C42022501	Gear 25T	1
13A-2	Do10101	Roller Hub Spring	4	18A-2	C42024001	Gear 40T	1
13A-3	A200127	Axle Tube 106mm	4	18A-3	C42024401	Gear 44T	1
13A-4	X009	Transmission Sprocket	3	18A-4	C42022101	Gear 21T	1
13A-5	X010	Driving Sprocket	1	18A-5	U01011201N	Flat Washer M12X25X2t	3
13A-6	Wo20126	C Clip 26	4	18A-6	T201201N	Hex Nut M12X10T-P1.75	2
13A-7	X011	Axle Bracket Assb.	4	18A-7	To2481250N	Hexagon Screw M12X50L	1
13A-13	X011-1	Axle Bracket	4	19A		Housing Cover Kit	1
13A-14	C420201	Chain Wheel	4	19A-1	E010161	Housing Cover	1
13A-8	So6260	Chain o6B-26S	4	19A-2	Ho1300302	Screw M6-P1x55L	2
13A-9	Wo20120	C Clip 20	4	20A	X014	Oil Cap Kit	1
13A-10	Ho1300201	Sprocket Case Cover	4	20A-1	Ho1300101	Oil Cap 5/8"	1
15A		Set of Roller $\Phi 120 \times 60$	4	20A-2	Jo30102	O Ring $\phi 20$	1
15A-1	Jo10101	Roller $\Phi 120 \times 60$	4	21A	X01501	Motor Kit Assb.	1
15A-2	Ho1300401	Dust-proof Cap	4	21A-1	Ro11038531	Motor Kit 1HP/380V/50Hz	1
15A-3	To1880804	Hexagon Screw M8X40L	8	21A-2	Ho10101	Switch Box Assb.	1
16A	X012	Worm Gear Assb.	1	21A-3	R100101	Switch	1
16A-1	E010105	Worm Gear Cover	1	21A-4	W4502	On/Off Indicator Light	1
16A-2	Jo30201	Retain Seal 32X17X8t	1	21A-5	Jo30103	O Ring $\phi 75$	1
16A-3	Vo16203	Bearing 6203	1	21A-6	To2880820N	Hexagon Screw M8x20L-P1.25	4
16A-4	A45300104	Worm Gear Shaft	1	44A	X01502	Inverter Motor 1HP/380V	1
16A-5	Fo30101	Worm Gear 24T	1	78A	To1880616N	Hexagon Screw M6x16L	3
16A-6	Wo70612	Key 6X6X12L	1				
16A-7	Jo30101	O Ring $\phi 120/\phi 3.1$	1				
Different electricity available at extra charge							



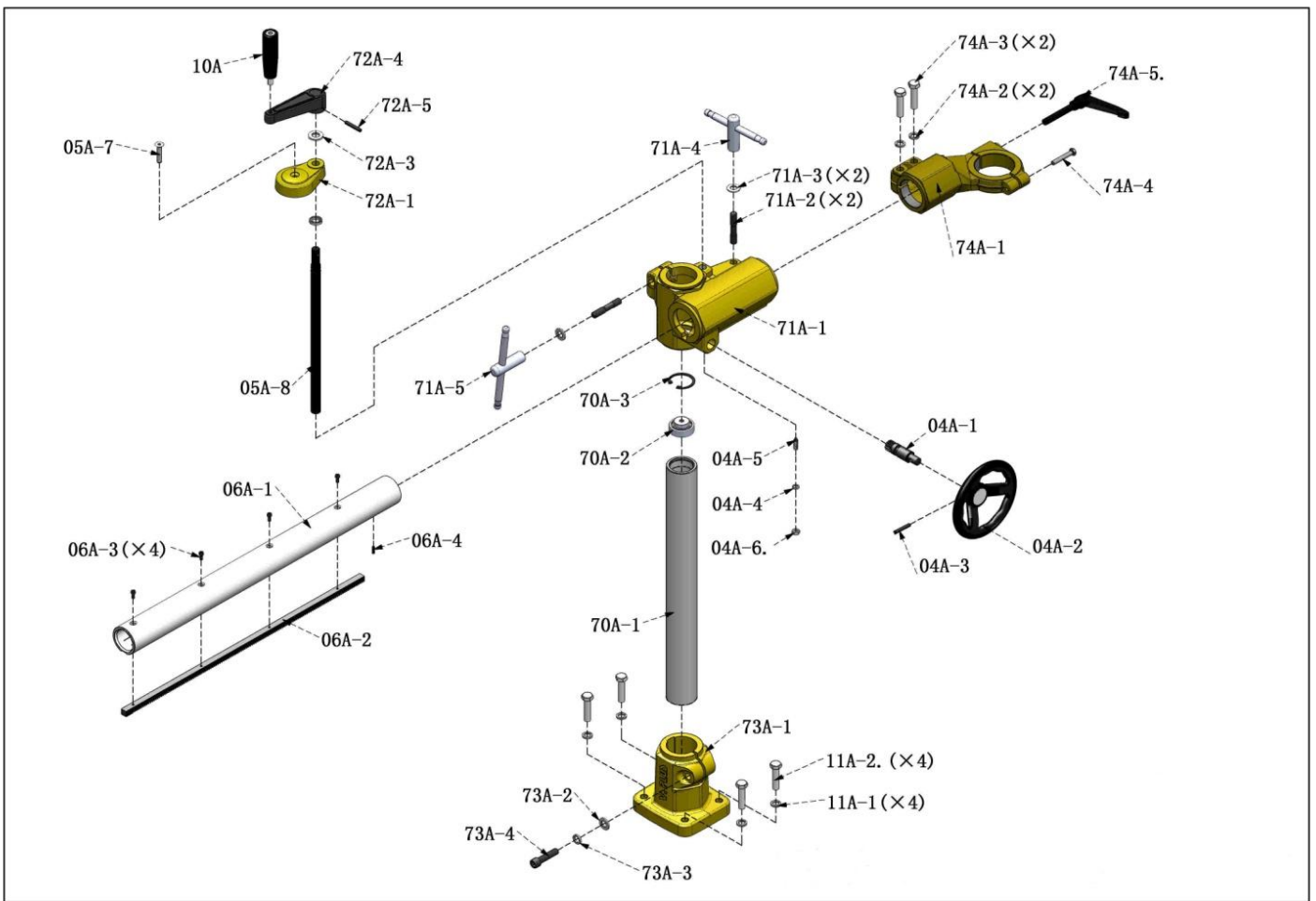
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PART#	CODE#	Description	Q'TY	PART#	CODE#	Description	Q'TY
12A		Feeder Body Assb.	1	17A		Sprocket Assb.	1
12A-1	X019	Feeder Body	1	17A-1	C420202	Sprocket Wheel S	2
12A-2	C420104	Sleeve $\phi 29 \times \phi 23 \times (9+3)$	1	17A-2	S06400	Chain 06B-40S	2
12A-3	T05010640	Set Screw M6X40L	4	17A-3	C420203	Joint Sprocket(Key)	4
13A		Transmission Sprocket	1	17A-4	S06620	Chain 06B-62S	1
13A-1	X008	Sprocket Case Assb.	4	17A-5	W020115	C Clip 15	3
13A-11	E010104	Sprocket Case	1	18A		Gear Set	2
13A-12	X008-1	Roller Shaft	4	18A-1	C42022501	Gear 25T	1
13A-2	D010101	Roller Hub Spring	4	18A-2	C42024001	Gear 40T	1
13A-3	A200127	Axle Tube 106mm	4	18A-3	C42024401	Gear 44T	1
13A-4	X009	Transmission Sprocket	3	18A-4	C42022101	Gear 21T	1
13A-5	X010	Driving Sprocket	1	18A-5	U01011201N	Flat Washer M12X25X2t	3
13A-6	W020126	C Clip 26	4	18A-6	T201201N	Hex Nut M12X10T-P1.75	2
13A-7	X011	Axle Bracket Assb.	4	18A-7	T02481250N	Hexagon Screw M12X50L	1
13A-13	X011-1	Axle Bracket	4	19A		Housing Cover Kit	1
13A-14	C420201	Chain Wheel	4	19A-1	E010161	Housing Cover	1
13A-8	S06260	Chain 06B-26S	4	19A-2	H01300302	Screw M6-P1x55L	2
13A-9	W020120	C Clip 20	4	20A	X014	Oil Cap Kit	1
13A-10	H01300201	Sprocket Case Cover	4	20A-1	H01300101	Oil Cap 5/8"	1
15A		Set of Roller $\phi 120 \times 60$	4	20A-2	J030102	O Ring $\phi 20$	1
15A-1	J010101	Roller $\phi 120 \times 60$	4	21A	X01501	Motor Kit Assb.	1
15A-2	H01300401	Dust-proof Cap	4	21A-1	R011038531	Motor Kit 1HP/380V/50Hz	1
15A-3	T01880804	Hexagon Screw M8X40L	8	21A-2	H010101	Switch Box Assb.	1
16A	X012	Worm Gear Assb.	1	21A-3	R100101	Switch	1
16A-1	E010105	Worm Gear Cover	1	21A-4	W4502	On/Off Indicator Light	1
16A-2	J030201	Retain Seal 32X17X8t	1	21A-5	J030103	O Ring $\phi 75$	1
16A-3	V016203	Bearing 6203	1	21A-6	T02880820N	Hexagon Screw M8x20L-P1.25	4
16A-4	A45300104	Worm Gear Shaft	1	44A	X01502	Inverter Motor 1HP/380V	1
16A-5	F030101	Worm Gear 24T	1	78A	T01880616N	Hexagon Screw M6x16L	3
16A-6	W070612	Key 6X6X12L	1				
16A-7	J030101	O Ring $\phi 120 / \phi 3.1$	1			Different electricity available at extra charge	



V-886/800							
PART#	CODE#	Description	Q'TY	PART#	CODE#	Description	Q'TY
16A	X012	Worm Gear Assb.	1	38A-1	A45400601	Transmission Gear Bracket	1
16A-1	E010105	Worm Gear Cover	1	38A-5	X038	Gear set (19T+ Bearing 1516)	2
16A-2	J030201	Retain Seal 32X17X8t	1	38A-6	U01031528	Flat Washer 28X15X1t	4
16A-3	V016203	Bearing 6203	1	38A-7	A302052	Gear Cap 28X5	2
16A-4	A45300104	Worm Gear Shaft	1	38A-8	T01880616N	Hexagon Screw M6X16L	5
16A-5	F030101	Worm Gear 24T	1	39A		Gear Set	1
16A-6	W070612	Key 6X6X12L	1	39A-1	D04012502	Gear 25T	1
16A-7	J030101	O Ring $\phi 120/\phi 3.1$	1	39A-2	W040515	Key 5X5X15L	3
20A	X014	Oil Cap Kit	1	39A-3	A302051	Gear Spacer $\phi 25 \times 15 \times 17.1$	1
20A-1	H01300101	Oil Cap 5/8"	1	39A-4	D04014201	Gear 42T	1
20A-2	J030102	O Ring $\phi 20$	1	39A-5	D04013101	Gear 31T	1
21A	X01501	Motor Kit Assb.	1	39A-6	U01011201N	Flat Washer M12X25X2t	2
21A-1	R011038531	Motor Kit 1HP/380V/50Hz	1	39A-7	T201201N	Hex Nut M12X10T-P1.75	2
21A-2	H010101	Switch Box Assb.	1	40A		Roller Shaft Assb.	4
21A-3	R100101	Switch	1	40A-1	A45300503	Roller Shaft A	1
21A-4	W4502	On/Off Indicator Light	1	40A-2	A45300504	Roller Shaft B	1
21A-5	J030103	O Ring $\phi 75$	1	40A-3	W020215	C Clip 15	2
21A-6	T02880820N	Hexagon Screw M8x20L-P1.25	4	40A-4	U01010602N	Flat Washer M6X18X1.5t	1
26A		Set of Roller $\phi 58 \times 60$	1	40A-5	T01880602	Hexagon Screw M6x12L-P1.0	1
26A-1	J010112	Roller $\phi 58 \times 60$	8	40A-6	X033-1	Sprocket Case Assb. (Gear 13T+Chain 20S+Chain Cover)	2
26A-2	U01010602N	Flat Washer M6X18X1.5t	8	41A		Transmission Shaft Assb.	1
26A-3	T01880602	Hexagon Screw M6X12L	8	41A-1	A45300507	Transmission Shaft A	2
35A		Feeder Body Assb.	1	41A-2	A45300111	Transmission Shaft B	2
35A-1	X036	Feeder Body	1	41A-3	S06360	Chain 06B-36S	2
35A-2	C420104	Sleeve $\phi 29 \times \phi 23 \times (9+3)$	1	41A-4	D04011901	Gear 19T (Keyway 16mm)	2
35A-3	T05010620	Set Screw M6X12L	4	41A-5	W040515	Key 5X5X15L	2
36A		Axle Bracket Assb.	1	41A-6	W050601	Grease Fitting M6XP1.0	4
36A-1	X032	Axle Bracket	8	42A		Spare Gear	1
36A-2	D010102	Roller Hub Spring	4	42A-1	D04011801	Gear 18T	1
36A-3	A200121	Axle Tube 99mm	4	42A-2	D04015501	Gear 55T	1
36A-4	W020126	C Clip 26	4	43A		Housing Cover Kit	1
37A		Driving Sprocket Assb.	1	43A-1	E010172	Housing Cover	1
37A-1	V0161904	Bearing 61904	1	43A-2	H01300303	Screw M6-P1X55L	1
37A-2	V016203	Bearing 6203	1	44A	X01502	Inverter Motor 1HP/380V	1
37A-3	A45300109	Driving Sprocket	1	78A	T01880616N	Hexagon Screw M6X16L	3
37A-4	W020117	C Clip 17	1				
38A	X044	Transmission Gear set Assb.	1			Different electricity available at extra charge	



S-101							
PART#	CODE#	Description	Q'TY	PART#	CODE#	Description	Q'TY
04A		Extension Hand Wheel Assb.	1	09A		Motor Clamp Assb.	1
04A-4	U02010801N	Spring Washer 8mmX2t	1	09A-1	B200501	Motor Clamp	1
04A-5	D011101	Set Screw M8-P1.25X25L	1	09A-2	T02480850N	Hexagon Screw M8X50L-P1.25	1
04A-6	T200801N	Hex Nut M8X14T-P1.25	1	09A-3	W061201	Pull Handle M12x95x75L	1
04A-7	H010305	Extension Hand Wheel	1	10A	H01020103	Grip M10-P1.5x100L	1
05A-1	B200604	Column Cap	1	11A	X003N	Base Mounting Screw	1
05A-2	A45305102	Elevating Screw M18X380L	1	11A-1	U02011201N	Spring Washer 12mmx3t	4
05A-3	V021528	Plane Bearing AXK1528	1	11A-2	T02481250N	Hexagon Screw M12x50L	4
05A-4	H01020203	Elevating Handle	1	70A		Elevating Column Assb. 540L	1
05A-5	W01020203	Lock Pin 6X40L	1	70A-1	A200130C	Elevating Column/No rack	1
05A-7	T061090801	Hexagon Screw M8X40L	1	70A-2	V026204T	Bearing 6204	1
05A-8	V026802	Bearing 6802-zZ	1	70A-3	W020147	C Clip 47	1
06A	X004	Extension Column Assb. 705L	1	71A	X050-2	Cross Bracket Assb.	1
06A-1	A200141	Extension Column 705L	1	71A-1	B200204	Cross Bracket	1
06A-2	A452004	Extension Rack 630L	1	71A-2	A45305118	Stud M12XP1.75/70L	2
06A-3	T01880501N	Hexagon Head Screw M5X12L-P0.8	4	71A-3	U01011201N	Flat Washer M12x24x2T	2
06A-4	W010416	Lock Pin 4X16L	1	71A-4	A45305002	Lever M12X150L	1
07A	X007-1	Swivel Joint Assb.	1	71A-5	A45305001	Lever M12X200L	1
07A-1	B200301	Swivel Joint	1	73A	X050-1	Column Base Assb.	1
07A-2	A45305107	Stud M18XP1.5/M16XP1	1	73A-1	B200101	Column Base	1
07A-3	A45305003	Lever 15mm	1	73A-2	U01011201N	Flat Washer M12x25x2T	1
07A-4	W010622	Lock Pin 6X22L	1	73A-3	U02011201N	Spring Washer 12mmx3t	1
07A-5	U02011201N	Spring Washer 12mmX3t	2	73A-4	T01881250	Hexagon Screw M12x50L	1
07A-6	T02481250N	Hexagon Screw M12X50L	2	74A	X051	Motor Clamp Assb.	1
08A	X007-2	Swivel Cone Assb.	1	74A-1	B200504	Motor Clamp	1
08A-1	B200401	Swivel Cone	1	74A-2	U02011201N	Spring Washer 12mmx3t	2
08A-2	A45305107	Stud M18XP1.5/M16XP1	1	74A-3	T02481250N	Hexagon Screw M12x50L	2
08A-3	A45305003	Lever 15mm	1	74A-4	T02480850N	Hexagon Screw M8X50L-P1.25	1
08A-4	W010622	Lock Pin 6X22L	1	74A-5	W061201	Pull Handle M12x95x75L	1



S-102							
PART#	CODE#	Description	Q'TY	PART#	CODE#	Description	Q'TY
01A	X001-1	Column Base Assb.	1	05A-8	Vo26802	Bearing 6802-2Z	1
01A-1	B200101	Column Base	1	06A	X004	Extension Column Assb. 705L	1
01A-2	A45305118	Stud M12XP1.75/70L	1	06A-1	A200141	Extension Column 705L	1
01A-3	U01011201N	Flat Washer M12x24x2T	1	06A-2	A452004	Extension Rack 630L	1
01A-4	A45305001	Lever M12X200L	1	06A-3	To1880501N	Hexagon Head Screw M5X12L-Po.8	4
02A	X002	Elevating Column Assb. 540L	1	06A-4	W010416	Lock Pin 4X16L	1
02A-1	A200131C	Elevating Column 540L	1	07A	X007-1	Swivel Joint Assb.	1
02A-2	A030104	Elevating Key 438L	1	07A-1	B200301	Swivel Joint	1
02A-3	To1880501N	Hexagon Head Screw M5X12L-Po.8	3	07A-2	A45305107	Stud M18XP1.5/M16XP1	1
02A-4	W010416	Lock Pin 4X16L	1	07A-3	A45305003	Lever 15mm	1
03A	X001-2	Cross Bracket Assb.	1	07A-4	W010622	Lock Pin 6X22L	1
03A-1	B200203	Cross Bracket	1	07A-5	U02011201N	Spring Washer 12mmX3t	2
03A-2	A45305118	Stud M12XP1.75/70L	2	07A-6	To2481250N	Hexagon Screw M12X50L	2
03A-3	U01011201N	Flat Washer M12x24x2T	2	08A	X007-2	Swivel Cone Assb.	1
03A-4	A45305002	Lever M12X150L	2	08A-1	B200401	Swivel Cone	1
04A		Extension Hand Wheel Assb.	1	08A-2	A45305107	Stud M18XP1.5/M16XP1	1
04A-4	U02010801N	Spring Washer 8mmX2t	1	08A-3	A45305003	Lever 15mm	1
04A-5	D011101	Set Screw M8-P1.25X25L	1	08A-4	W010622	Lock Pin 6X22L	1
04A-6	T200801N	Hex Nut M8X14T-P1.25	1	10A	H01020103	Grip M10-P1.5x100L	1
04A-7	H010305	Extension Hand Wheel	1	11A	X003N	Base Mounting Screw	1
05A		Elevating Screw Kit	1	11A-1	U02011201N	Spring Washer 12mmx3t	4
05A-1	B200604	Column Cap	1	11A-2	To2481250N	Hexagon Screw M12x50L	4
05A-2	A45305102	Elevating Screw M18X380L	1	74A		Motor Clamp Assb.	1
05A-3	Vo21528	Plane Bearing AXK1528	1	74A-1	B200504	Motor Clamp	1
05A-4	H01020203	Elevating Handle	1	74A-2	U02011201N	Spring Washer 12mmX3t	2
05A-5	W01020203	Lock Pin 6X40L	1	74A-3	To2481250N	Hexagon Screw M12X50L	2
05A-6	A45305130	Column Cap Set bar	1	74A-4	To2480850N	Hexagon Screw M8X50L	1
05A-7	To61090801	Hexagon Screw M8X40L	1	74A-5	W061201	Pull Handle M12x95x75L	1