

# PROMAC®

BX-834 / BX-834V / BX-840VB

## Instruction Manual



TOOLTEK CO.,428 Taichung ,Taiwan  
Walter Meier (Tool) AG,CH-8117  
Fällanden  
TOOL(France)Sarl,F-91029 Evry

**CAUTION: BEFORE USING THE MACHINE BE SURE TO READ THIS MANUAL**

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## **1-1. Unpacking:**

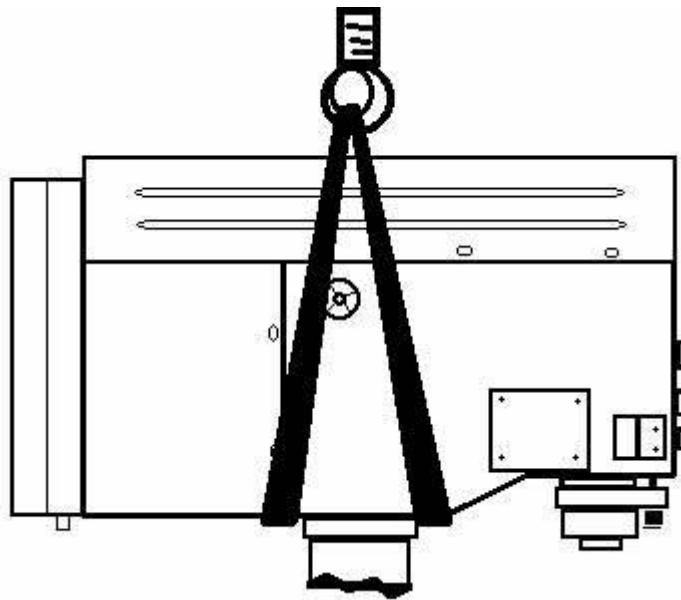
Before unpacking, make sure the carton configuration have no damaged, broken or parts extruded, if found above defect case, contact to your retailer for change a new one as soon as possible.

Unpacking procedure:

1. Carefully open the carton. (Pull it from the bottom to the top)
2. Take out and read the manual, check parts list and relative ancillary.
3. Inspect the machine outline if it is in normal condition or not. Crack, rust, collapse and separated are strictly prohibited.
4. Cleaning the surface of the machine.
5. Assembly the drill machine base on manual, instruction guide.

## **1-2. Transportation instruction:**

1. Please refer to instruction manual in specification and machine weight to arrange handling manner. Be sure to use capable fork – lifter or hoist to lift of machine.
2. The handling and transportation shall be carried out by qualified persons.
3. Fork – lift or hoist can be used in handling and shall be operated by qualified driver.
4. While transportation, keep attention to the balance of machine.
5. During handling, the machine shall be lifted only in vertical direction.
6. Before handling, make sure all movable parts are secured in their position and all movable accessories should be removed from machine.
7. The steel rope should average pull the machine head, table and column tightly.
8. Keep all the process in a carefully and slightly condition.
9. Bump or crash are strictly prohibited. It will cause precision shift and electronic controller damaged.



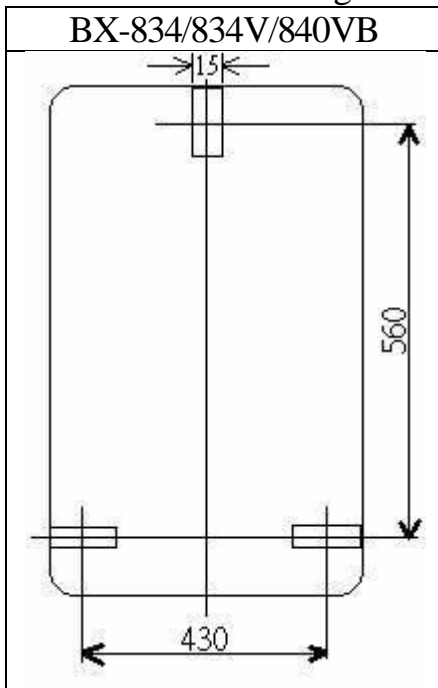
### 1-3. Setting the machine instruction:

1. The machine base with setting hole will be setting the machine on concrete floor.

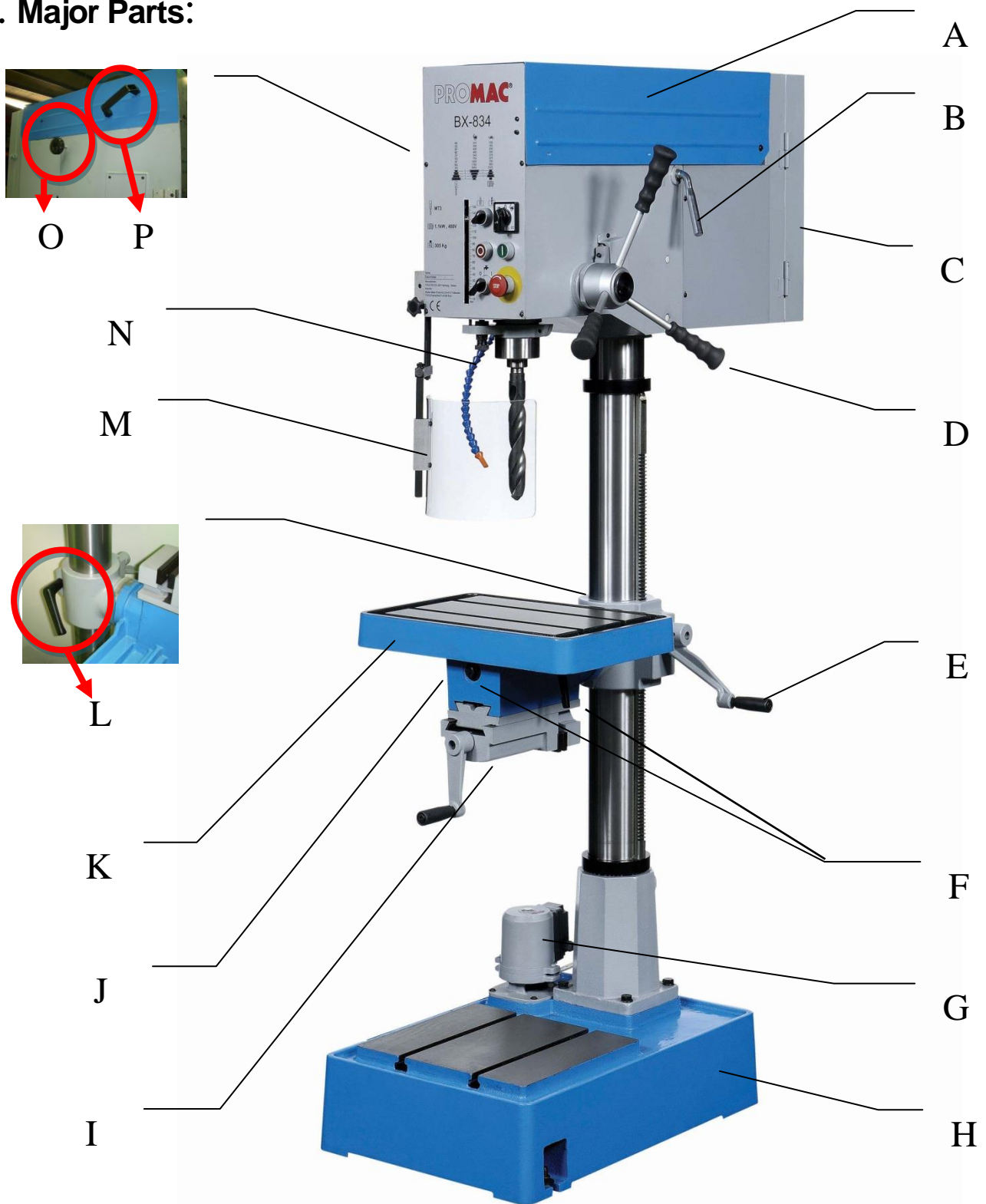
2. Recommended the high of dimension switch operation is 1.4 -1.6 M.

| The outlined procedures of setting the machine | MODEL    | AREA      | SETTED SCREW |
|--|----------|-----------|--------------|
|  | BX-834   | X=900×700 | M12          |
|  | BX-834V  | X=900×700 | M12          |
|  | BX-840VB | X=900×700 | M12          |
|  |          |           |              |
|  |          |           |              |
|  |          |           |              |

3. The dimension of setting hole:



# 1-4. Major Parts:



|                                       |                                      |
|---------------------------------------|--------------------------------------|
| A= Pulley Cover                       | I= Vice 3” (For BX-834V or BX-834)   |
| B= Motor Handle                       | J= Vice Lock (For BX-834V or BX-834) |
| C= Switch cover                       | K= Table                             |
| D= Feed Handle                        | L= Clamp Handle                      |
| E= Table Handle                       | M= Safety Guard                      |
| F= Table Lock (For BX-834V or BX-834) | N= Pump Valve Lock                   |
| G= Pump Motor                         | O= Belt Tension Lock                 |
| H= Base                               | P= Belt Cover Handle                 |

## 2. Safety Instruction:

### **Read Instruction Manual before operating the machine for your own safety.**

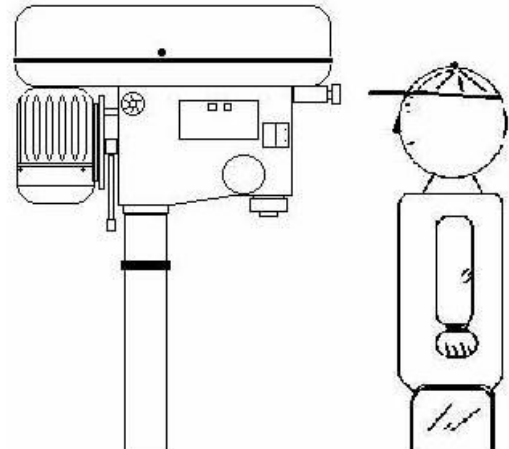
1. Make sure the power voltage is for the machine. Before connecting the plug to socket, it is necessary to check the power spec. to avoid damaged occurred.
2. During the machine is not used for a long time, the plug should be disconnected.
3. Never stand the power cable near the fire or water environment, any broken or pressed of power cable is not allowed.
4. It shall be stable and securely fixed in machine installation procedure for the machine to be used safety.
5. The working piece must be tightly fixed on table by vise or clamp.
6. Use recommended cutting liquid, consult the owner's manual for recommended.
7. Feed speed should be executed under safety scope, please refer to manual 3-3.
8. Wear proper apparel, no loose clothing, gloves, neckties, ring, bracelet to get caught in operation. Always wear safety glasses, cap and specific clothes.
9. Check all parts are in place and securely locked before transportation. Bump and crash are prohibited.
10. Routing maintenance and repaired should be executed follow the rules of manual.
11. Recommended use the industrial suction to clean the chip .
12. Recommended move the working piece which the weight over 10 kg used carrier move it.
13. Recommended wear safety gloves when install the drilling bit or tooling to avoid hurt your hand.
14. This machine only be used following material brass, cast iron, steel, iron, aluminum .
15. It is prohibited to open the pulley cover in operation.
16. It is prohibited to use damaged or cracked parts
17. It is prohibited to removed the guard cover away in operation.

18. It is prohibited to move the table when machine in operation.
19. It is prohibited to operate this machine beyond the limit of its capacity,
20. Refer to this instruction for details.
21. It is prohibited to insert one's hand or finger into the hole of working piece in operation.
22. It is prohibited all visitors and children should stand near work area while the machine in operation.
23. It is prohibited to wear gloves, neckties, ring, bracelet and loose clothing in operation.
24. It is prohibited to use plastic and wooden working.
25. Check again before switch on power,
  - A- Make sure the power voltage is for the machine.
  - B- Make sure the machine is completely assembled and installed
  - C- Make sure chuck, working table, working piece are completely secured or tightly fixed.
  - D- Make sure the chuck key is removed from chuck.
  - E- Make sure drill bit or tooling need to be fixed in the chuck.
26. Switch off power at once;
  - A- When fixed or removed working piece.
  - B- When the normal maintenance, service , adjustment or repairing.
  - C- When the operator leave the machine.
  - D- When corrected work table adjustment and depth position.
  - E- When change or remove the drilling bit or tooling.

27. Working temp. 5 --- 40°C, Humidity 40--- 50, Elevation 0 ---1000 M

Storage temp -25--- 55°C

28. Operate location diagram for reference.

| Diagram 1 |                  | Diagram 2  |  |
|-----------|------------------|--|--|
| MODEL     | Ultimate loading |  |  |
| BX-834    | 70 kg            |  |  |
| BX-834V   | 70 kg            |  |  |
| BX-840VB  | 50 kg            |  |  |
|           |                  |  |  |
|           |                  |  |  |
|           |                  |  |  |

### 3-1. Control panel instruction:

|   |   |
|---|---|
| <p style="text-align: center; color: red;"><b>BX-834 only</b></p> <p style="text-align: center;"><b>PROMAC®</b><br/><b>BX-834</b></p> <p>DE 210 105<br/>CE 290 145<br/>DF 400 200<br/>BE 480 240<br/>CF 540 270<br/>DG 750 375<br/>AF 1400 700<br/>BG 1790 890<br/>AG 2650 1325</p> <p>MT3</p> <p>1.1kW , 400V</p> <p>305 Kg</p> <p>Serie: /<br/>Datum/date: /<br/>Manufacturer: TOOLTEX CO.,428 Taichung , Taiwan<br/>Importer: Walter Meier (Tool) AG,CH-8117 Fällanden<br/>TOOL(France)Sarl,F-91029 Evry</p> <p>CE</p> | <p>A. Jkm Cam Switch (high/low)</p> <p>B. Start Button</p> <p>C. Emergency Stop Button</p> <p>D. Feed Depth Adjustment</p> <p>E. Drill / Tap Switch</p> <p>F. Stop Button</p> <p>G. Cutting Liquid Control Switch</p>   |
| <p style="text-align: center; color: red;"><b>For BX-834V or BX-840VB</b></p> <p style="text-align: center;"><b>PROMAC®</b><br/><b>BX-834V</b></p> <p>230-2500<br/>80-1000</p> <p>80 - 2500 /min</p> <p>8888</p> <p>/min</p> <p>MT3</p> <p>1.5kW , 400V</p> <p>295 Kg</p> <p>Serie: /<br/>Datum/date: /<br/>Manufacturer: TOOLTEX CO.,428 Taichung , Taiwan<br/>Importer: Walter Meier (Tool) AG,CH-8117 Fällanden<br/>TOOL(France)Sarl,F-91029 Evry</p> <p>CE</p>  | <p>A. min-1 or /min (R.P.M.) Indicator</p> <p>B. Speed Control Switch</p> <p>C. Fault light</p> <p>D. Start Button</p> <p>E. Emergency Stop Button</p> <p>F. Feed Depth Adjustment</p> <p>G. Drill / Tap Switch</p> <p>H. Stop Button</p> <p>I. Cutting Liquid Control Switch</p> |



## 3-2. Operation illustration and procedure:

1. Drill / Tap switch : For changing the machine to Drill Mode or Tap Mode.
2. Work table and vise adjustment (for BX-834V / BX-834 only)  
Loose the work table and vise set screw then turn the work table 180 degree, let the vise be upside. Then completely tight the set bolt.
3. There are two T grooves in the worktable. It is used to fix the work piece.
4. There are two T grooves in the base, too. It is convenient for fixed the longer, heavier and larger working piece.
5. Spindle speed adjustment is controlled by the speed control switch. The speed will be showed out in the electronic digital meter. (for BX-834V/BX-840VB only)
6. The belt tension could be adjusted by a quickly crank in the right side of the machine head.
7. The pulley cover is strictly prohibited to open in normal operation condition.
8. Do not adjust the worktable when machine in operation.
9. Protect safety guard shall be allocated in a proper position in operation. It is controlled by a micro witch.
10. If it needs to stop urgently, just push the emergency stop switch.
11. These machines have special design for tapping, a quick change device.  
During tapping, if you want spindle to turn reversely and withdraw tapping tip, just pull up grip handle only. If you want to continue to operate, just press down grip handle.











### Chuck Protection Guard



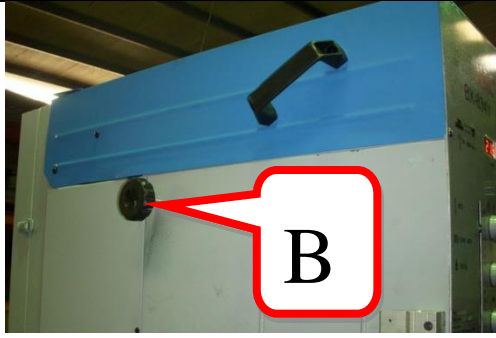
### 3-3. Operation tips: Speed Selection

Open pulley case and check if spindle speed min-1or/min (R.P.M.) is correct for your job.

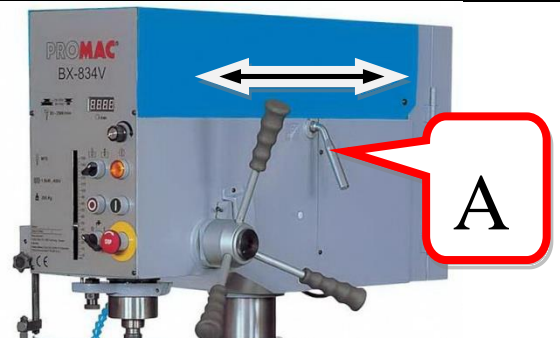
Recommended

| Drill<br>m/m | Material   |   |   |   |   |  |   |   |   |   |
|--------------|--|---|---|---|---|--|---|---|---|---|
|              | Cast Iron  |   | Steel   |   | Iron  |  | Aluminium   |   | Alloy Copper  |   |
|              |                                     |  |  |  |  |  |  |  |  |  |
| ø2           | 4780   | 2390  | 1275  | 635   | 3980  | 1910   | 7960  | 3980  | 4460  | 2230  |
| ø3           | 3185   | 1590  | 850   | 425   | 2650  | 1275   | 5310  | 2655  | 2970  | 1485  |
| ø4           | 2390   | 1195  | 640   | 320   | 1990  | 955  | 3980  | 1990  | 2230  | 1115  |
| ø5           | 1910   | 955   | 510   | 255   | 1590  | 765  | 3185  | 1590  | 1785  | 890   |
| ø6           | 1590   | 795   | 425   | 210   | 1330  | 640  | 2655  | 1330  | 1485  | 745   |
| ø7           | 1365   | 680   | 365   | 180   | 1140  | 545  | 2275  | 1140  | 1275  | 635   |
| ø8           | 1195   | 600   | 320   | 160   | 995   | 480  | 1990  | 995   | 1115  | 555   |
| ø9           | 1060   | 530   | 285   | 140   | 885   | 425  | 1770  | 885   | 990   | 495   |
| ø10          | 955  | 480   | 255   | 125   | 800   | 380  | 1590  | 800   | 890   | 445   |
| ø11          | 870  | 435   | 230   | 115   | 725   | 350  | 1450  | 725   | 910   | 405   |
| ø12          | 795  | 400   | 210   | 105   | 665   | 320  | 1330  | 665   | 745   | 370   |
| ø13          | 735  | 365   | 195   | 100   | 610   | 295  | 1225  | 610   | 685   | 340   |
| ø14          | 680  | 340   | 180   | 90  | 570   | 270  | 1135  | 570   | 635   | 320   |
| ø15          | 640  | 320   | 170   | 85  | 530   | 255  | 1060  | 530   | 600   | 300   |
| ø16          | 600  | 300   | 160   | 80  | 500   | 240  | 995   | 500   | 560   | 280   |
| ø17          | 560  | 280   | 150   | 75  | 470   | 225  | 935   | 470   | 525   | 260   |
| ø18          | 530  | 265   | 140   | 70  | 440   | 210  | 885   | 440   | 495   | 250   |
| ø19          | 500  | 250   | 135   | 67  | 420   | 200  | 835   | 420   | 470   | 235   |
| ø20          | 480  | 240   | 130   | 65  | 400   | 190  | 795   | 400   | 445   | 225   |
| ø25          | 380  | 190   | 100   | 50  | 320   | 155  | 640   | 320   | 355   | 180   |
| ø30          | 320  | 160   | 85  | 45  | 265   | 130  | 530   | 265   | 300   | 150   |
| ø40          | 240  | 120   | 65  | 30  | 200   | 95   | 400   | 200   | 225   | 110   |
| note         | Processing is adjustable on the cutting materials as well as the material of the cutting to real cutting conditions. |   |   |   |   |  |   |   |   |   |

# BX-834 / BX-834V / BX-840VB



**B**

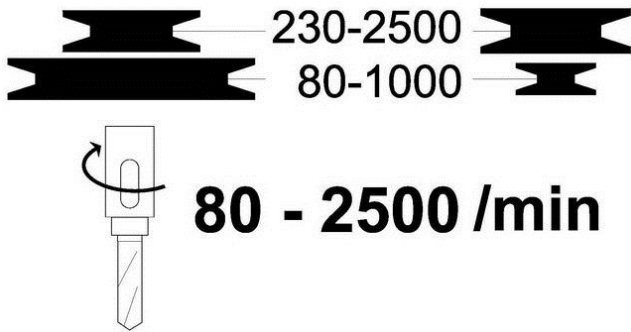


**A**

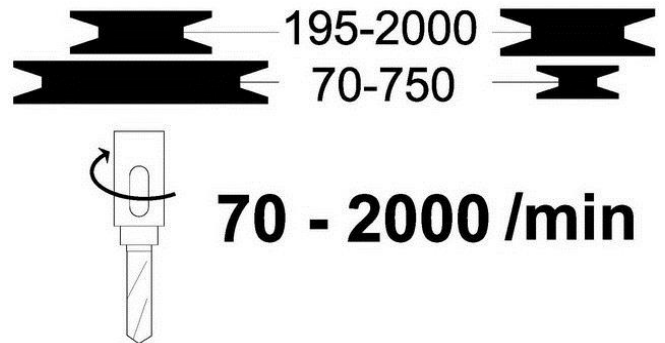
1. Loosen knobs B on both sides of headstock.
2. Push handle A forward as arrow sign to get belt tension.
3. Lock knobs B firmly to fix belt tension.

When speed change is required. Loosen lead bolt (parts no. 22-S2) on both side of headstock. Pull belt handle (parts no. 26) to allow belts repositioning and then move belts to correct groove to acquire desired speed. See following speed chart for refeence.

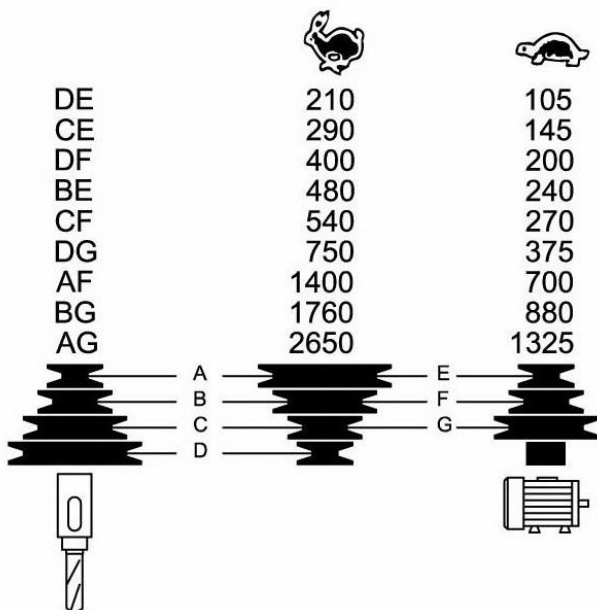
## For BX-834V



## For BX-840VB

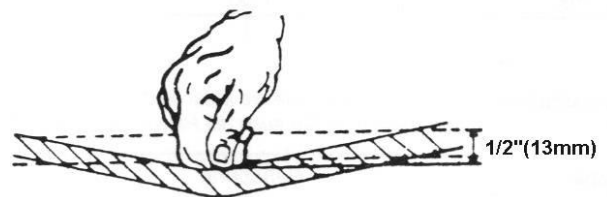


## For BX-834

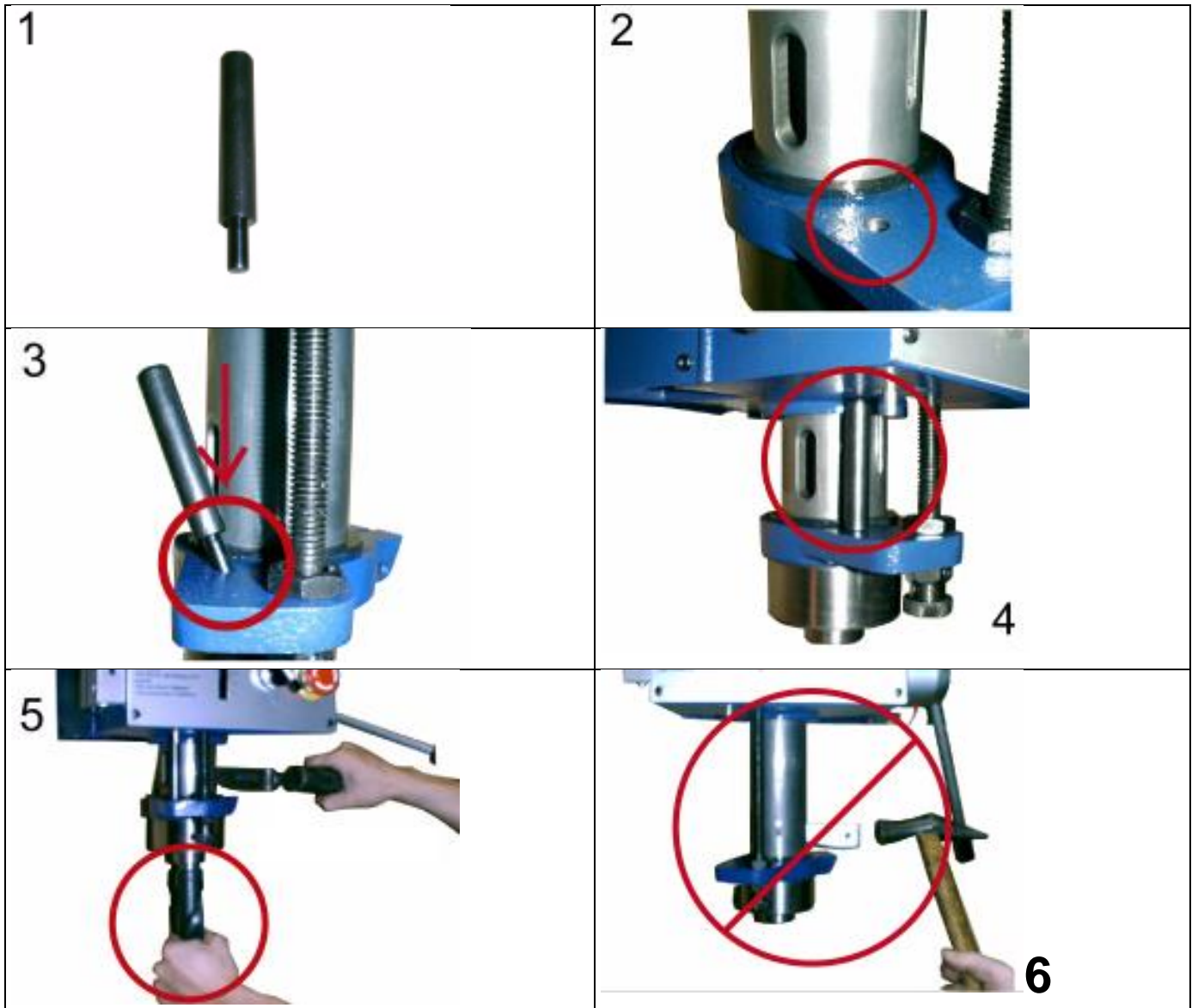


## For BX-834 only

For proper belt tension, use 10 lbs pressure or hand pressure on the belt as shown as bellow. The recommended distance is about 13mm.



### 3-4. Withdraw drill bit :



1. Bracket bar.

2. Setting hole for bracket bar

3. Insert bracket bar into setting hole.

4. Completely insert bracket bar and ready for operating.

5. Recommend to use special designed wedge for withdrawing tooling

6. Don't push spindle stroke too long to avoid spindle stick.

## 4. Operation procedure:

**Caution**            Read instruction manual before operating the machine.

- (1) Check the power source  
Push the start button to judge the motor and spindle shaft is in normal condition or not.
- (2) Speed adjustment  
After turn on the power, rotate the speed control switch form min. to max. position. When rotation the switch, the speed will be changed and the speed value will be displayed in liquid digital meter. (for electronic LCD type only)
- (3) Adjust work table position  
Firstly, loose the clamp handle in left hand, then swing the table handle to properly position. Finally tight the clamp handle.
- (4) Adjust the height of work table to properly position, then fix the screw.  
The worktable height depends on the working piece volume and height, if a incline angle is necessary, loss the set screw first, then rotate the angle alignment the scale of the work table. Finally, tight the set screw, if a vise will be used in the operation same as above, loose the set screw, turn 180 degrees, let vise on the upside. Finally tight the set screw
- (5) There are two T grooves on the worktable. It is used to fix the working piece.
- (6) There are two grooves in the base, too. It is convenient for fixed the longer, heavier and larger working piece.
- (7) Secure the working piece on the worktable, as possible locate the working piece in the center of the worktable.
- (8) Complete above caution item and make sure no problem, then select the properly tool for operation. Refer instruction manual suggestion adopt corrected cutting feed.
- (9) Use Spindle Pulley to choose High or Low speed if 2-spped motor is equipped to the machine.
- (10) Before operation, the protected safety guard shall be pushed to proper position. There is a micro switch in guard, the power will be shut down, when guard does not close well or not in specified position.

## 5. Trouble – Shooting ;

Warning: Switch off power and remove plug from power source outlet before trouble shooting.

| NO. | SYMPTOM  | DISPOTITION  |
|-----|--|--|
| 1   | Drill insert in working piece and spindle shaft stop                           | 1. Push emergency button<br>2. Turn off the power<br>3. Use hand to turn the spindle shaft countermarch. Let the tool withdraw from the working piece.<br>4. Suction the chip on the hole.<br>5. Turn on power again.<br>6. Adopt slowly feed make sure in normal condition then recovery the normal feed. |
| 2   | Cutting liquid in abnormal condition and can not supply the adequate quantity. | 1. Check the pump is running or not<br>2. Check the hose is leakage, jam or cutting liquid lacked.   |
| 3   | Spindle shaft can not running completely                                       | 1. Check the belt tension condition<br>2. If belt tension is too loose adjust the belt shifter, otherwise change the aging belt.   |
| 4   | Motor do not work  | 1. Check the power and switch<br>2. Check the power cable is damaged or not if cable is broken, change it directly.  |
| 5   | Spindle shaft has noise  | 1. Check bearing<br>2. Check V – belt, if tightly degree over specific tension will cause noise.   |
| 6   | Drill oscillation  | 1. Check chuck condition<br>2. Make sure the drill is properly fixed in the chuck.   |

## 6.Maintenance:

Warning: Switch off power and remove plug from power source outlet before maintenance.

### RECOMMENDED USE ISO68 LUBRICANT.

| NO | MAINTAIN PARTS ITEM                   | PERIOD     | DISPOTITION   |
|----|---------------------------------------|------------|---|
| 1  | Column shaft                          | 10 days    | Add lubricant   |
| 2  | Work table                            | Everyday   | 1. Remove and clean the chip<br>2. Add rust-proof oil   |
| 3  | Work table                            | Everyday   | 1. Avoid to hit or collapse the surface of work table   |
| 4  | Work table / column base              | Everyday   | 1. After operation the table should be adjusted to original position to prevent the deformation occurs  |
| 5  | Column                                | Everyday   | 1. Cleaning the stain from the column<br>2. Add lubricant to prevent rust<br>3. Strictly to hit the column if have any caved in surface need to repair it at once |
| 6  | Control panel                         | Everyday   | 1. Clean the cutting liquid or oil stain  |
| 7  | Power Cable                           | 1 week     | 1. Check the cable configuration if damaged or broken change it   |
| 8  | Pump                                  | First time | 1. Check the running direction<br>2. If reverse running change two phase wire.  |
| 9  | Cutting liquid                        | 3 Month    | 1.Attention the liquid level and chemical reaction  |
| 10 | Motor                                 | 3 Month    | 1.clean the dust and void water spray to inner wire   |
| 11 | Base                                  | Everyday   | 1. clean and add rust – proof oil   |
| 12 | Belt                                  | 1 week     | 1. Check belt tension and aging status  |
| 13 | Pinion                                | 1 week     | 1. Clean the dust and chip then add lubricant   |
| 14 | Attachment and parts                  | 1 Month    | 1.Always keep cleaning.<br>2.Add rust-proof oil.  |
| 15 | Pulley cover                          | 1 week     | 1.Check loosing and fitting.  |
| 16 | quill                                 | Everyday   | 1.Check loosing and fitting.<br>2.Add lubricant.  |
| 17 | Rack                                  | 1 week     | 1.Clearn the dust and chip.<br>2.Add lubricant.   |
| 18 | Micro switch<br>emergency stop switch | Everyday   | 1.Check on - off action.<br>2.If any damaged or broken.<br>prohibited operate machine.<br>and, repair it at once.   |

Models belt model tables

| Machine model | Belt specifications | Quantity |
|---------------|---------------------|----------|
| BX-834        | 5340                | 2        |
| BX-834V       | 5PK 1335            | 1        |
| BX-840VB      | 5PK 1495            | 1        |

## 7. Specification and sound pressure;

| <i>Model</i>                |       | <i>BX-834</i>       | <i>BX-834V</i>  | <i>BX-840VB</i>     |
|-----------------------------|-------|---------------------|-----------------|---------------------|
| Drilling cap. (mm)          |       | Ø32                 |                 | Ø40                 |
|                             |       | M4 ~ M20            |                 | M4 ~ M20            |
| Swing (mm)                  |       | 460mm               |                 | 600                 |
| Spindle taper               |       | M.T.#3              |                 | M.T.#4              |
| Spindle travel (mm)         |       | 140mm               |                 | 145mm               |
| No of spindle speed         |       | 9 × 2 Steps         | Variable Speeds | Variable Speeds     |
| Spindle speed (rpm)         | 50 Hz | 105 – 2650/min      | 80 – 2500/min   | 70 – 2000/min       |
| Column diameter (mm)        |       | Ø102mm              |                 | Ø115mm              |
| Table size (m/m)            |       | T 320 × 480mm       |                 | T 400 × 470mm       |
| Base size (mm)              |       | T 660 × 465 mm      |                 | T 660 × 465 mm      |
| Motor                       |       | 1.1kW 400V 3Ph      | 1.5kW 400V 3Ph  | 2.2kW 400V 3Ph      |
| Net weight (kgs)            |       | N.W-305Kg           | N.W-295Kg       | N.W-300Kg           |
| Packing dimension (mm)      |       | 1110 × 570 × 2030mm |                 | 1160 × 570 × 2060mm |
| Measurement                 |       | 45.4 CU.FT          |                 | 48.1 CU.FT          |
| Packing cartons per machine |       | 1                   |                 | 1                   |

|  |   |               |                |                 |       |
|--|---|---------------|----------------|-----------------|-------|
|  |   | <b>BX-834</b> | <b>BX-834V</b> | <b>BX-840VB</b> |       |
|  | A |               | 1810           |                 | 1900  |
|  | B |               | 330            |                 | 347.5 |
|  | C |               | 230            |                 | 230   |
|  | D |               | 880            |                 | 1100  |
|  | E |               | 720            |                 | 715   |
|  | F |               | 1130           |                 | 1145  |
|  | G |               | 1000           |                 | 1050  |
|  | H |               | 230            |                 | 300   |

**A- weighted sound pressure level measuring under no load**

**Drilling-series** Operator position

**Lpa= 62 dB(A)**

**A- weighted sound pressure level measuring under load**

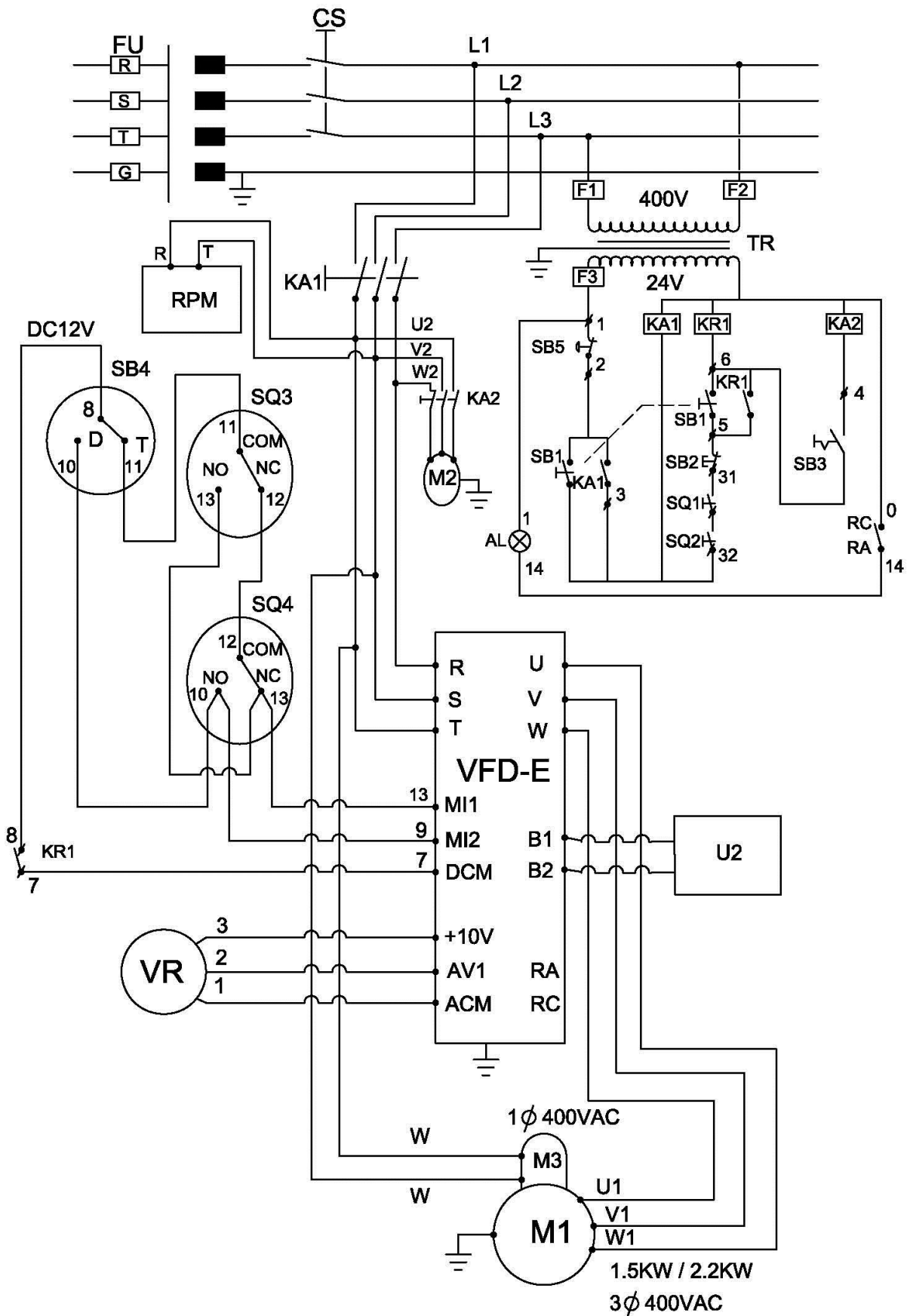
**Drilling- series** Operator position

**Lpa= 64 dB(A)**



## 8. Control circuit diagram and component part list;

### BX-834V / BX-840VB

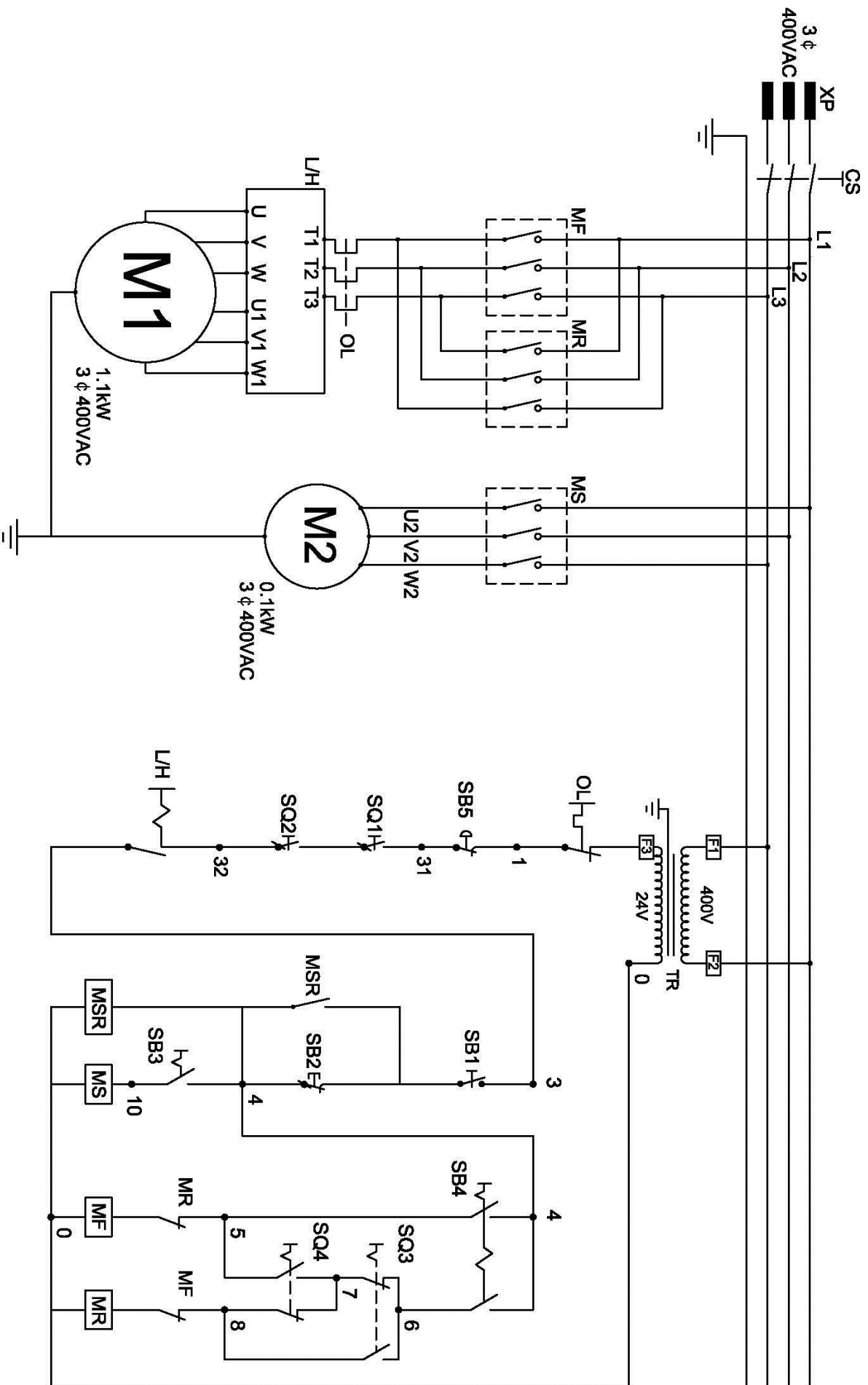


## PARTS LIST

**BX-834V/BX-840VB**

| Part No. | Component/Object             | Type/<br>Model      | Ratings/<br>Technical Data                 | PCS | Complies with the<br>following standard | Marks of<br>conformity<br>granted |
|----------|------------------------------|---------------------|--|-----|---|-----------------------------------|
| CS       | GENERAL ON/OFF SWITCH        | ZH-C316             | AC 440V 16A                                | 1   | EN60947                                 | CE                                |
| KA1      | CONTACTOR                    | C-12D               | AC 440V/24V/12A                            | 1   | IEC 947-4-1                             | CE UL SA                          |
| KA2      | CONTACTOR                    | C-12D               | AC 440V/24V/12A                            | 1   | IEC 947-4-1                             | CE UL SA                          |
| TR       | TRANSFORMER                  | SL-2930N            | AC400V/24V7.2VA                            | 1   | IEC61558-1/-2-4                         | CE                                |
| SB1      | PUSH BUTTON                  | GBF-22              | INO AC 125V, 6A                            | 1   | IEC 144                                 | CSA CE                            |
| SB2      | PUSH BUTTON                  | GBF-22              | INC AC 125V, 6A                            | 1   | IEC 144                                 | CSA CE                            |
| SB3      | SELECTION SWITCH PUMP        | GLCS-22             | INC AC 125V, 6A                            | 1   | IEC 144                                 | CSA CE<br>LR108205-2              |
| SB4      | SELECTION SWITCH (DRILL/TAP) | GCS-22              | INAAC125V,6A                               | 1   | IEC 144                                 | CSA CE<br>LR108205-2              |
| SB5      | EMERGENCY STOP               | GLEB-22             | INC AC 125V, 6A                            | 1   | IEC 144                                 | CSA CE<br>LR108205-2              |
| VFD-E    | INVERTER                     | VFD-E               | AC 400V / 1.5kW<br>AC 400V / 2.2kW         | 1   | EN 50178<br>EN 61800-3                  | CE<br>EMC                         |
| U2       | BRAKING RESISTOR             | QSOJ013             | 200W250Ω                                   | 1   |   |                                   |
| VR       | SPEED ADJUSTING KNOB         | RV24YN              | DC 10V                                     | 1   |   |                                   |
| M1       | MOTOR MAIN SPINDLE           | BX-834V<br>BX-840VB | 1.5kW / AC 400V/3Ph<br>2.2kW / AC 400V/3Ph | 1   |   |                                   |
| M2       | MOTOR PUMP                   | 8150                | 0.1kW/ AC 400V /3Ph                        | 1   |   |                                   |
| M3       | MOTOR COOLING FAN            | UF-12A38            | AC 400V / 1PH                              | 1   |   |                                   |
| SQ1      | MICOR SWITCH CHUCK GUARD     | VS10N001C2          | AC 250V / 10A                              | 1   |   |                                   |
| SQ2      | MICOR SWITCH COVER GUARD     | QKS8                | AC 250V / 12A                              | 1   | VDE0660<br>EN60947-5-1                  |                                   |
| SQ3      | LIMIT SWITCH TAPPING         | Z-15GW2-B           | AC 250V / 15A                              | 1   | EN 61058-1<br>VDE                       |                                   |
| SQ4      | LIMIT SWITCH REVERSE         | VX-5-1A2            | AC 250V / 5A                               | 1   | VDE                                     |                                   |
| XP       | SOCKET                       | TBC-20              | AC 600V /10A                               | 16  |   | UL                                |
| F1.F2.F3 | FUSE STE                     | MFB-103             | FUSE-F1.F2-0.5A<br>FUSE-F3-3A              | 3   |   |                                   |
| KR1      | RELAY                        | BMY5-2C5-S-CWL      | 24VAC / 28V 5A                             | 1   |   |                                   |
| AL       | Fault                        | PLN22Y24            | AC 30V,0.5A                                | 1   | IEC 144                                 | CSA CE                            |
| RPM      | RPM DISPLAY UNIT             | RPM108              | 440V                                       | 1   |   |                                   |

# BX-834



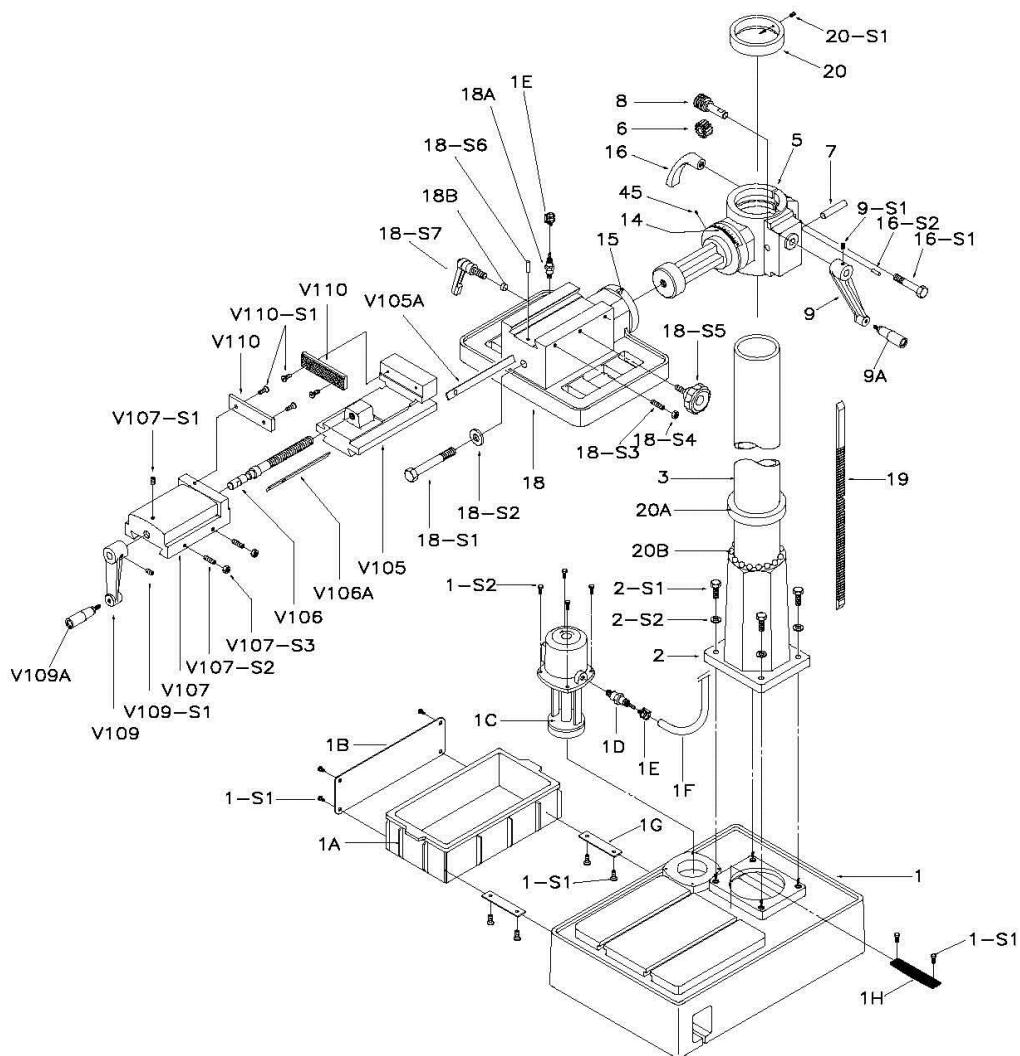
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**PARTS LIST**

**BX-834**

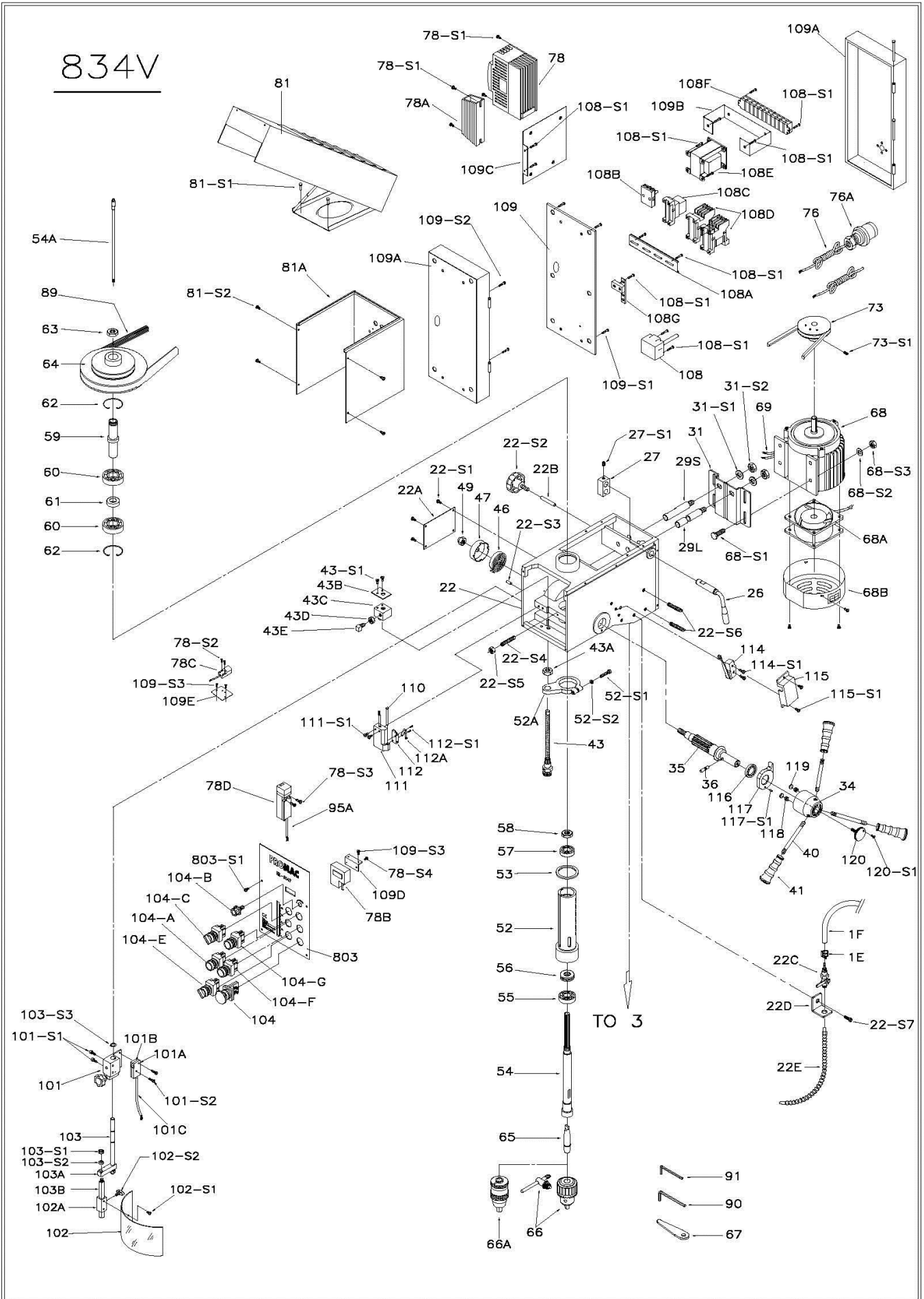
| Part No. | Component/Object             | Type/<br>Model | Ratings/<br>Technical Data    | PCS | Complies with the<br>following standard | Marks of<br>conformity<br>granted |
|----------|------------------------------|----------------|-------------------------------|-----|---|-----------------------------------|
| CS       | GENERAL ON/OFF SWITCH        | ZH-C316        | AC 440V 16A                   | 1   | EN60947                                 | CE                                |
| MR       | CONTACTOR                    | KNL9-01        | AC 440V/24V/12A               | 1   | IEC 60947-4-1                           | CE UL SA                          |
| MF       | CONTACTOR                    | KNL9-01        | AC 440V/24V/12A               | 1   | IEC 60947-4-1                           | CE UL SA                          |
| OL       | OVERLOAD                     | NTH-6.5        | AC 600V 6A (4.5-6.5A)         | 1   | IEC 60947-4-1                           | CE UL SA                          |
| MSR      | RELAY                        | JQX-13F        | AC24V 5A                      | 1   |   | CE UL SA                          |
| MS       | RELAY                        | BMY5-2C5-S-CL  | 24VAC / 28V 5A                | 1   |   | CE UL SA                          |
| SB1      | PUSH BUTTON                  | GBF-22         | INO AC 125V, 6A               | 1   | IEC 144                                 | CSA CE                            |
| SB2      | PUSH BUTTON                  | GBF-22         | INC AC 125V, 6A               | 1   | IEC 144                                 | CSA CE                            |
| SB3      | SELECTION SWITCH PUMP        | GLCS-22        | INC AC 125V, 6A               | 1   | IEC 144                                 | CSA CE<br>LR108205-2              |
| SB4      | SELECTION SWITCH (DRILL/TAP) | GCS-22         | INAAC125V,6A                  | 1   | IEC 144                                 | CSA CE<br>LR108205-2              |
| SB5      | EMERGENCY STOP               | GLEB-22        | INC AC 125V, 6A               | 1   | IEC 144                                 | CSA CE<br>LR108205-2              |
| L/H      | CAM SWITCH                   | AC-22A         | AC600V 20A                    | 1   | IEC 60947-3                             | CSA CE                            |
| M1       | MOTOR MAIN SPINDLE           | BX-834         | 1.1kW / AC 400V/3Ph           | 1   |   |                                   |
| M2       | MOTOR PUMP                   | 8150           | 0.1kW/ AC 400V /3Ph           | 1   |   |                                   |
| SQ1      | MICOR SWITCH CHUCK GUARD     | VS10N001C2     | AC 250V / 10A                 | 1   |   |                                   |
| SQ2      | MICOR SWITCH COVER GUARD     | QKS8           | AC 250V / 12A                 | 1   | VDE0660<br>EN60947-5-1                  |                                   |
| SQ3      | LIMIT SWITCH TAPPING         | Z-15GW2-B      | AC 250V / 15A                 | 1   | EN 61058-1<br>VDE                       |                                   |
| SQ4      | LIMIT SWITCH REVERSE         | VX-5-1A2       | AC 250V / 5A                  | 1   | VDE                                     |                                   |
| XP       | SOCKET                       | TBC-20         | AC 600V /10A                  | 16  |   | UL                                |
| TR       | TRANSFORMER                  | SL-2930N       | AC400V/24V7.2VA               | 1   | IEC61558-1/-2-4                         | CE                                |
| F1.F2.F3 | FUSE STE                     | MFB-103        | FUSE-F1.F2-0.5A<br>FUSE-F3-3A | 3   |   |                                   |

# 9. Drawing and parts list;

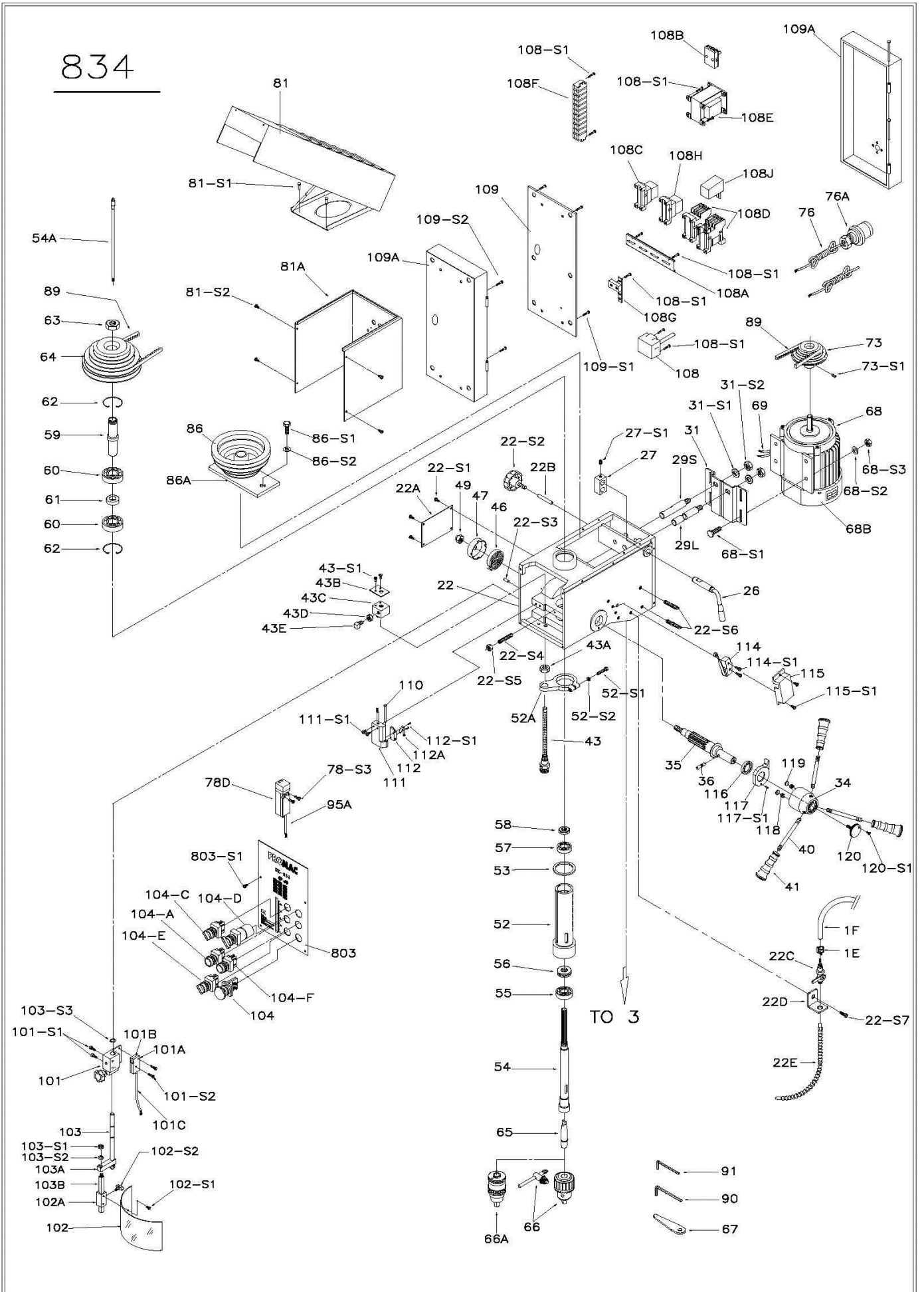
834V / 834



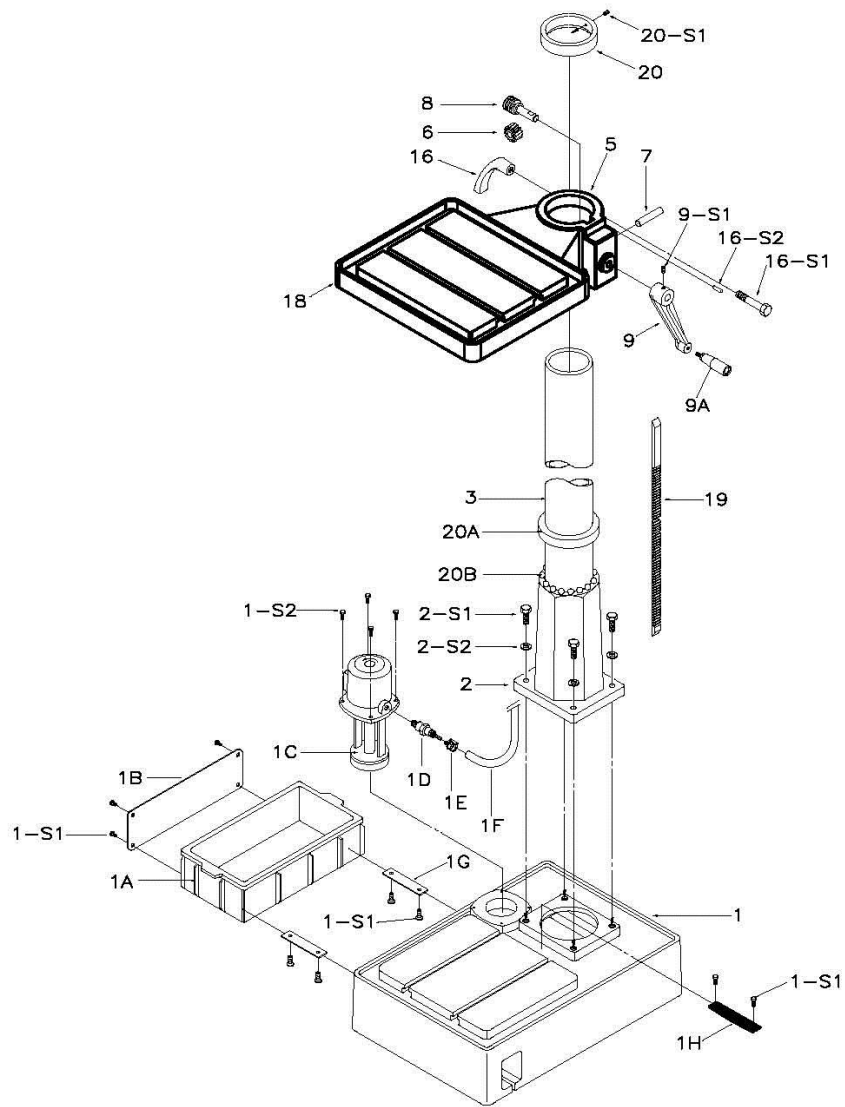
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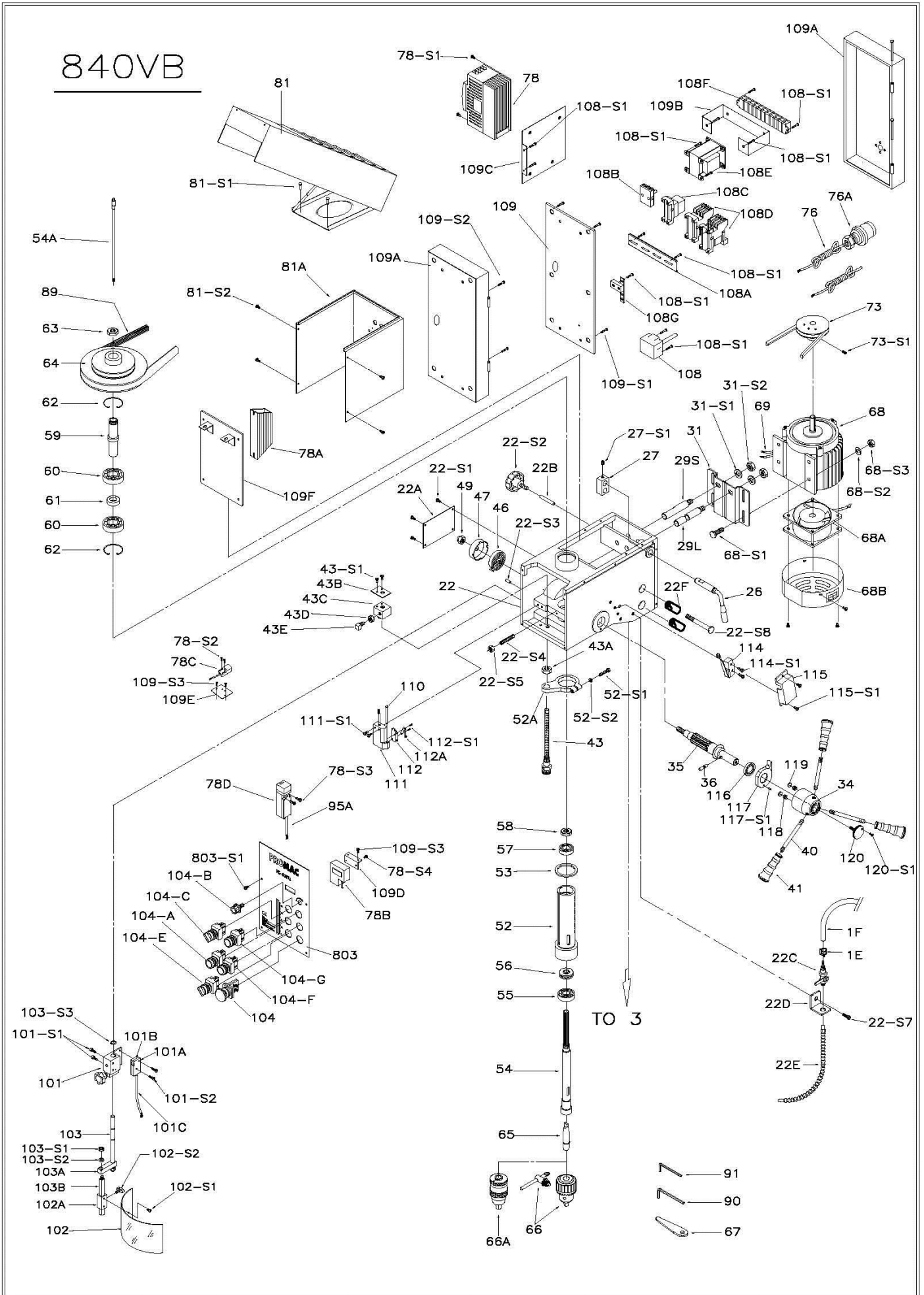


# 840VB





# 840VB



|       |                               |
|-------|-------------------------------|
| 1     | BASE                          |
| 1A    | WATER TANK                    |
| 1B    | BASE COVER                    |
| 1C    | PUMP MOTOR 400V               |
| 1D    | ADAPTER                       |
| 1E    | CLAMP                         |
| 1F    | HOSE                          |
| 1G    | WATER TANK COVER              |
| 1H    | HOSE COVER                    |
| 1-S1  | SCREW                         |
| 1-S2  | SCREW                         |
| 2     | COLUMN HOLDER                 |
| 2-S1  | BOLT                          |
| 2-S2  | SPRING WASHER                 |
| 3     | COLUMN                        |
| 5     | TABLE BRACKET                 |
| 6     | GEAR                          |
| 7     | SHAFT                         |
| 8     | WORM                          |
| 9     | TABLE HANDLE                  |
| 9A    | HANDLE BOLT                   |
| 9-S1  | SET SCREW                     |
| 14    | SCALE                         |
| 15    | ANGLE SCALE                   |
| 16    | CLAMP HANDLE                  |
| 16-S1 | CLAMP BOLT                    |
| 16-S2 | PIN                           |
| 18    | TABLE                         |
| 18A   | ADAPTER                       |
| 18B   | BUSH                          |
| 18-S1 | BOLT                          |
| 18-S2 | SPRING WASHER                 |
| 18-S3 | SET SCREW                     |
| 18-S4 | NUT                           |
| 18-S5 | LEAD BOLT                     |
| 18-S6 | PIN                           |
| 18-S7 | SWIVEL HANDLE                 |
| 19    | RACK                          |
| 20    | RACK RING                     |
| 20A   | RACK RING                     |
| 20B   | STEEL BALLS                   |
| 20-S1 | SET SCREW                     |
| 22    | HEAD BODY                     |
| 22A   | SIDE COVER                    |
| 22B   | SHAFT                         |
| 22C   | VALVE                         |
| 22D   | FIXING PLATE                  |
| 22E   | NOZZLE                        |
| 22F   | Aluminum fixed (For BX-840VB) |
| 22-S1 | SCREW                         |
| 22-S2 | LEAD BOLT                     |
| 22-S3 | PIN                           |
| 22-S4 | SET SCREW                     |

|       |                     |
|-------|---------------------|
| 22-S5 | NUT                 |
| 22-S6 | SET SCREW           |
| 22-S7 | BOLT                |
| 22-S8 | BOLT (For BX-840VB) |
| 26    | SHIFTER             |
| 27    | SHIFTER             |
| 27-S1 | SET SCREW           |
| 29L   | SLIDE BAR(L)        |
| 29S   | SLIDE BAR(S)        |
| 31    | MOTOR BASE PLATE    |
| 31-S1 | SPRING WASHER       |
| 31-S2 | NUT                 |
| 34    | HANDLE BODY         |
| 35    | FEED SHAFT          |
| 36    | SET SCREW           |
| 40    | FEED HANDLE         |
| 41    | GRIP                |
| 43    | DEPTH ROD           |
| 43A   | NUT                 |
| 43B   | DEPTH SCALE BRACKET |
| 43C   | NUT                 |
| 43D   | DEPTH SCALE         |
| 43E   | DEPTH SCALE BRACKET |
| 43-S1 | SCREW               |
| 45    | PIN                 |
| 46    | SPRING              |
| 47    | SPRING CAP          |
| 49    | NUT                 |
| 52    | QUILL               |
| 52A   | SLEEVE              |
| 52-S1 | BOLT                |
| 52-S2 | SPRING WASHER       |
| 53    | RUBBER WASHER       |
| 54    | SPINDLE             |
| 54A   | Draw bar            |
| 55    | BALL BEARING        |
| 56    | THRUST BEARING      |
| 57    | BALL BEARING        |
| 58    | SPINDLE NUT         |
| 59    | SPINDLE SLEEVE      |
| 60    | BALL BEARING        |
| 61    | COLLAR              |
| 62    | SNAPRING            |
| 63    | PULLEY NUT          |
| 64    | SPINDLE PULLEY      |
| 65    | TAPER ARBOR         |
| 66    | DRILL CHUCK         |
| 66A   | DRILL CHUCK         |
| 67    | DRILL SHIFTER       |
| 68    | MOTOR               |
| 68A   | FANS                |
| 68B   | MOTOR COVER         |
| 68-S1 | BOLT                |

|        |                                  |
|--------|----------------------------------|
| 68-S2  | WASHER                           |
| 68-S3  | NUT                              |
| 69     | MOTOR WIRE                       |
| 73     | MOTOR PULLEY                     |
| 73-S1  | SET SCREW                        |
| 76     | WIRE                             |
| 76A    | WIRE PLUG                        |
| 78     | SPEED CONTROLLER                 |
| 78A    | BRAKING RESISTOR                 |
| 78B    | RPM DISPLAY UNIT                 |
| 78C    | SPEED SENSOR                     |
| 78D    | MICOR SWITCH                     |
| 78-S1  | SCREW                            |
| 78-S2  | SCREW                            |
| 78-S3  | SCREW                            |
| 78-S4  | SCREW                            |
| 81     | PULLEY COVER                     |
| 81A    | REAR PULLEY COVER                |
| 81-S1  | SCREW                            |
| 81-S2  | SCREW                            |
| 86     | Transmitting Pulley (For BX-834) |
| 86A    | PULLEY SHAFT (For BX-834)        |
| 86-S1  | SCREW (For BX-834)               |
| 86-S2  | SPRING WASHER (For BX-834)       |
| 89     | V-BELT                           |
| 90     | ALLEN WRENCH (L)                 |
| 91     | ALLEN WRENCH (S)                 |
| 95A    | WIRE                             |
| 101    | MICOR SWITCH BRACKET             |
| 101A   | MICOR SWITCH                     |
| 101B   | MICOR SWITCH BOARD COVER         |
| 101C   | MICOR SWITCH WIRE                |
| 101-S1 | SCREW                            |
| 101-S2 | SCREW                            |
| 102    | SAFETY GUARD                     |
| 102A   | SAFETY GUARD SLIDE               |
| 102-S1 | SCREW                            |
| 102-S2 | LEAD BOLT                        |
| 103    | BRACKET ROD                      |
| 103A   | SUPPORT ARM                      |
| 103B   | LOWER BRACKET ROD                |
| 103-S1 | NUT                              |
| 103-S2 | SPRING WASHER                    |
| 103-S3 | C-RING                           |
| 104    | EMERGENCY STOP SWITCH            |
| 104-A  | ON SWITCH                        |
| 104-B  | RPM SWITCH                       |
| 104-C  | CHANGE SWITCH                    |
| 104-D  | JKM CAM SWITCH (For BX-834)      |
| 104-E  | CHANGE SWITCH                    |
| 104-F  | OFF SWITCH                       |
| 104-G  | Fault Lamp                       |
| 108    | GENERAL SWITCH                   |
| 108A   | Aluminum Strip                   |
| 108B   | FUSE STE                         |
| 108C   | CONTACTOR RELAY                  |

|         |                              |
|---------|------------------------------|
| 108D    | ELECTRIC CONTROLLER          |
| 108E    | TRANSFORMER                  |
| 108F    | SOCKET                       |
| 108G    | Grounding                    |
| 108H    | Pump CONTACTOR (For BX-834)  |
| 108J    | OVERLOAD RELAY (For BX-834)  |
| 108-S1  | SCREW                        |
| 109     | WIRE TERMINAL PLATE          |
| 109A    | GENERAL SWITCH BOX           |
| 109B    | SWITCH BRACKET               |
| 109C    | SWITCH BRACKET               |
| 109D    | SWITCH BRACKET               |
| 109E    | SWITCH BRACKET               |
| 109F    | SWITCH BRACKET(For BX-840VB) |
| 109-S1  | SCREW                        |
| 109-S2  | SCREW                        |
| 109-S3  | SCREW                        |
| 110     | STEEL BAR                    |
| 111     | MICOR SWITCH PLATE           |
| 111-S1  | SCREW                        |
| 112     | MICOR SWITCH BODY            |
| 112A    | MICOR SWITCH TRIGGER         |
| 112-S1  | SCREW                        |
| 114     | MICOR SWITCH                 |
| 114-S1  | SCREW                        |
| 115     | MICOR SWITCH COVER           |
| 115-S1  | SCREW                        |
| 116     | THRUST BEARING               |
| 117     | TAPPING SENSOR               |
| 117-S1  | PIN                          |
| 118     | SPRING                       |
| 119     | MAGNET                       |
| 120     | ORIENTATION BOLT             |
| 120-S1  | SCREW                        |
| V105    | VICE BODY                    |
| V105A   | VICE SLIDER (L)              |
| V106    | LEAD SCREW                   |
| V106A   | VICE SLIDER (S)              |
| V107    | MOVING STAND                 |
| V107-S1 | SET SCREW                    |
| V107-S2 | SET SCREW                    |
| V107-S3 | NUT                          |
| V109    | VICE HANDLE                  |
| V109A   | HANDLE BOLT                  |
| V109-S1 | SET SCREW                    |
| V110    | MOUNT JAW                    |
| V110-S1 | SCREW                        |
| 803     | SWITCH COVER                 |
| 803-S1  | SCREW                        |