AXMINSTER PROFESSIONAL

AP340PD Code 107704
AP325PD Code 107705
AP700PD Code 107706
AP540PD Code 107707

Pillar Drills

User manual

AP340PD
Code: 107704

AP325PD
Code: 107705

AP700PD
Code: 107706

AP540PD
Code: 107707

AXMINSTER THREE YEAR GUARANTEE

AT: 09/06/2023
BOOK VERSION: 8

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EU DECLARATION OF CONFORMITY

Cert No: Drill Press

Axminster Tool Centre Ltd
Axminster Devon
EX13 5PH UK
axminstertools.com

declares that the machinery described:-

Type	**Pillar Drill**
Model	**AP340PD, AP325PD AP700PD,AP540PD**

Signed

Andrew Parkhouse
Operations Director Date: **03/05/2017**

EU Declaration of Conformity

This machine complies with the following directives:

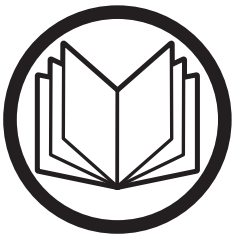
2006/42/EC
2014/30/EU
EN 60204-1:2006+A1+AC
EN 12717+A1:2009
06/42/EC - Annex I/05.2006

EN 61000-3-11:2000
EN 55014-1:2017
EN 55014-2:2015
EN 61000-3-2:2014
EN 55014-1:2006+A1+A2
EN 55014-2:1997+A1+A2

conforms to the machinery example for which the EC Type-Examination Certificate No AE50397160, AE50397166, AM50377776 has been issued by **Laizhou Planet Machinery Co., Ltd.** at: Yutai West Street Laizhou, Shandong 261400 China

and complies with the relevant essential health and safety requirements

The symbols below advise the correct safety procedures when using this machine.



Fully read manual and safety instructions before use

Ear protection should be worn

Eye protection should be worn

Dust mask should be worn

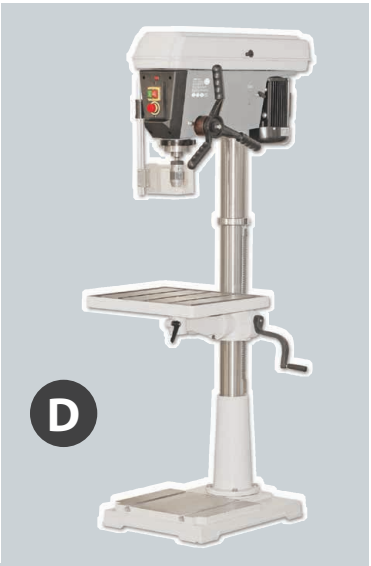
HAZARD

Model Number		AP340PD
Quantity	**Item**	**Part**
1 No	Small Bench Pillar Drill **(ZQJ4116K)**	**A**

Model Number		AP325PD
Quantity	**Item**	**Part**
1 No	Medium Bench Pillar Drill **(ZQJ4119K)**	**B**

Model Number		AP700PD
Quantity	**Item**	**Part**
1 No	Floor Pillar Drill **(ZQJ4125QK)**	**C**

Model Number		AP540PD
Quantity	**Item**	**Part**
1 No	Floor Pillar Drill **(ZQJ4132K)**	**D**

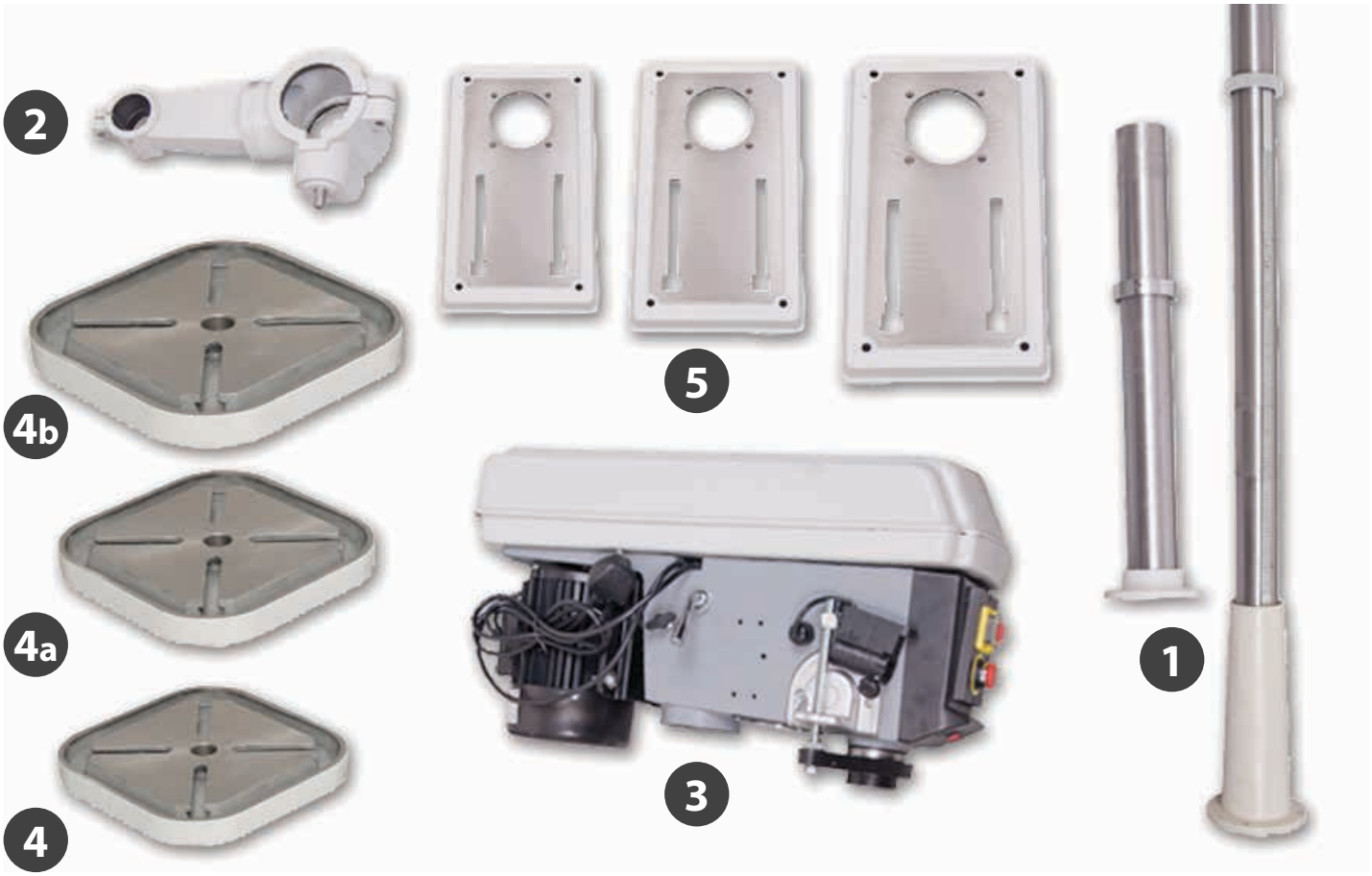


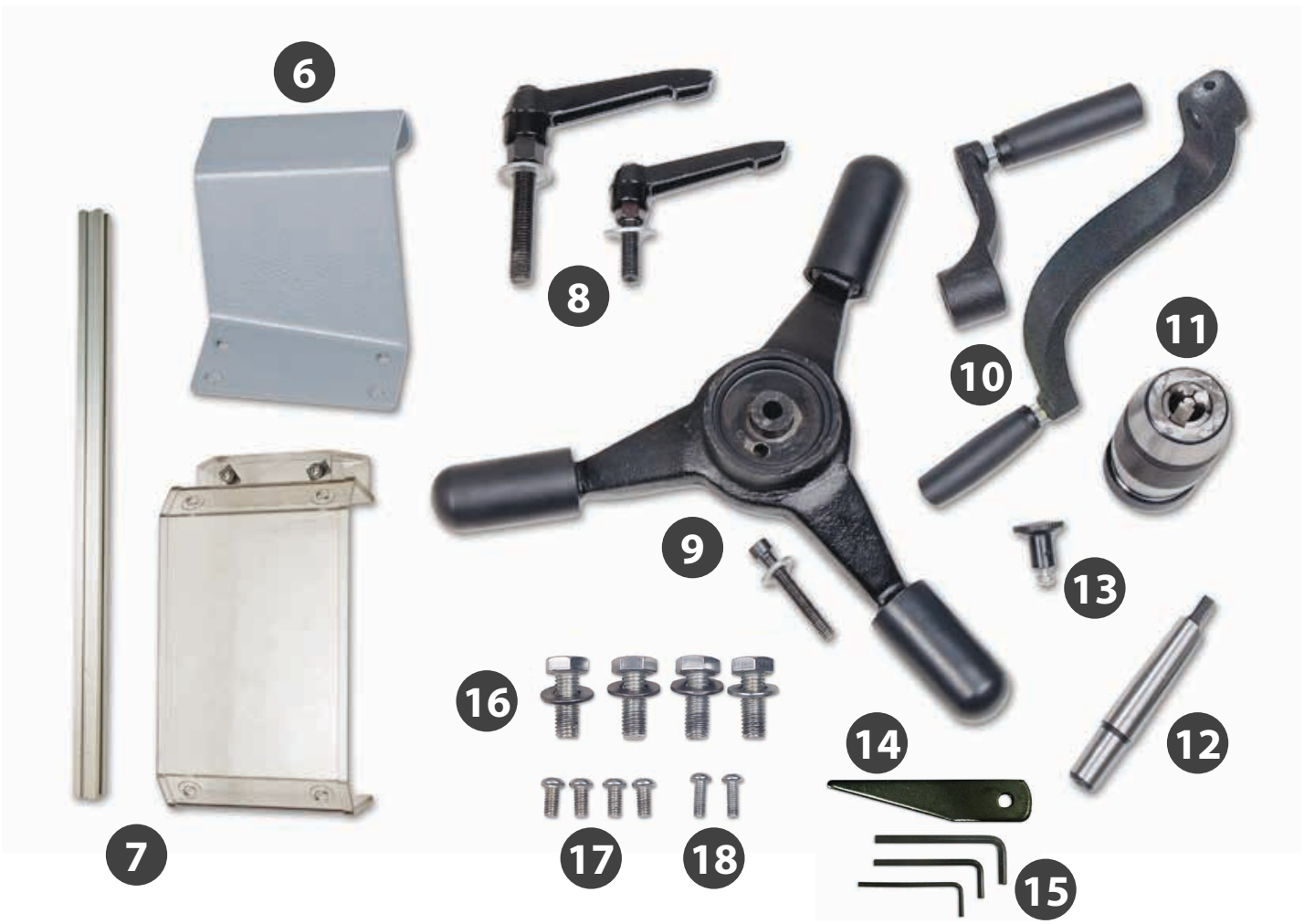
THE AP540PD IS EXTREMELY HEAVY & COMES LARGELY ASSEMBLED FOR SAFETY AND TRANSPORT!

Box Containing:

1	Pillar for drill head complete with mounting flange, rise and fall rack and retaining ring	**1**	
1	Drill table extension bracket arm	**2**	
1	Pillar drill head	**3**	
1	Drill table square (Small)	**4**	(107704 ONLY)
1	Drill table square (Medium)	**4a**	(107705 ONLY)
1	Drill table square (Large)	**4b**	(107706 ONLY)
1	Base (Small,Medium, Large)	**5**	(107704-107705-107706 ONLY)
1	Chuck guard assembly mounting bracket	**6**	
1	Chuck guard assembly	**7**	
2	Lift and shift handle clamps for the rise and fall mechanism, drill table	**8**	
1	Lever feed handle assembly with M8x50mm cap head screw	**9**	
1	Crank handle for table rise and fall mechanism (small)	**10**	(107704-107705-107706 ONLY)
1	Crank handle for table rise and fall mechanism (Large)	**10**	(107707 ONLY)
1	Keyless chuck 3-16mm	**11**	
1	Morse taper arbor for chuck assembly	**12**	
1	Pulley cover knob & Phillips screw	**13**	
1	Morse taper drift	**14**	
3	Hex Keys 3-5-6mm	**15**	
4	M10x25mm + washers	**16**	(107704-107705-107706 ONLY)
4	M6x11mm Button head Phillips screws	**17**	
2	M5x14mm Button head Phillips screws	**18**	

WHAT'S INCLUDED





The following will enable you to observe good working practices, keep yourself and fellow workers safe and maintain your tools and equipment in good working order.

WARNING!! KEEP TOOLS AND EQUIPMENT OUT OF REACH OF YOUNG CHILDREN

KEEP WORK AREA AS UNCLUTTERED AS IS PRACTICAL. UNDER NO CIRCUMSTANCES SHOULD CHILDREN BE ALLOWED IN WORK AREAS.

Mains Powered Tools

- Tools are supplied with an attached 13 Amp plug.
- Inspect the cable and plug to ensuree that neither are damaged. Repair if necessary by a suitably qualified person.
- Do not use when or where it is liable to get wet.

Workplace

- Do not use 230V a.c. powered tools anywhere within a site area that is flooded.
- Keep machine clean.
- Leave machine unplugged until work is about to commence.
- Always disconnect by pulling on the plug body and not the cable.
- Carry out a final check e.g. check the cutting tool is securely tightened in the machine and the correct speed and function set.
- Ensure you are comfortable before you start work, balanced, not reaching etc.
- Wear appropriate safety clothing, goggles, gloves, masks etc. Wear ear defenders at all times.
- If you have long hair wear a hair net or helmet to prevent it being caught up in the rotating parts of the machine.
- Consideration should be given to the removal of rings and wristwatches.
- Consideration should also be given to non-slip footwear etc.
- If another person is to use the machine, ensure they are suitably qualified to use it.
- Do not use the machine if you are tired or distracted
- Do not use this machine within the designated safety areas of flammable liquid stores or in areas where there may be volatile gases.
- Check cutters are correct type and size, are undamaged and are kept clean and sharp, this will maintain their operating performance and lessen the loading on the machine.
- **OBSERVE....** make sure you know what is happening around you and **USE YOUR COMMON SENSE.**

GENERAL SAFETY INSTRUCTIONS FOR DRILLING MACHINES

1. DO NOT operate the machine without carrying out a preliminary inspection.

2. CHECK that the speed is correct for the planned operation, and the upper drive belt cover is closed and fastened secure.

3. CHECK the drill bit is the correct size and type, is correctly fitted and tightened in the chuck.

4. Make sure that the drill head, the table bracket arm, the table tilt and the table swivel clamps are all locked before any drilling is attempted.

5. DO NOT attempt to carry out any drilling operation on material that has not been secured to the drill table, either by vice or clamp.

6. Remove any tools (chuck key, spanners etc), that may have been used in setting up operations and put them away in their correct stowage positions.

7. Try to arrange the drilling operation so that the drill tip does not come in contact with the table.

8. ALWAYS allow the drill to stop before removing drills or swarf from around the job or the table.

9. NEVER remove 'flying' swarf strands from the drill whilst it is turning.

10. It is a good precaution to wear eye protection when drilling, especially using small drills, or very hard material that produces small chips.

11. It is not a good idea to wear gloves when operating a drill press.

12. After the job is completed, remove all tools and accessories from the machine, check that drill bits are still sharp and re-use able.

13. Clean the machine down thoroughly, including removing coolant or cutting compounds from the drill table.

14. Lightly coat all metal surfaces with a light oil coating.

15. Disconnect the machine from the supply. Secure the cable/ plug clear of the floor.

Code	107704
Model	AP340PD
Rating	Professional
Power	650W (230V 1ph)
Speed Range	(12) 210-2,580rpm
Throat	165 mm
Taper	2MT
Chuck Cap/Type	1-16mm keyless
Chuck Travel	80 mm
Max Chuck to Table	340 mm
Max Chuck to Base	530 mm
Diameter of Column	70 mm
Table Size	260 x 260 mm
Table Tilt	45˚ - 0 - 45˚
Base Size	420 x 250 mm
Overall Size L x W x H	640 x 370 x 820 mm
Weight	63 kg

Code	107705
Model	AP325PD
Rating	Professional
Power	750W (230V 1ph)
Speed Range	(12) 120-2,580rpm
Throat	178 mm
Taper	2MT
Chuck Cap/Type	1-16mm keyless
Chuck Travel	80 mm
Max Chuck to Table	325 mm
Max Chuck to Base	500 mm
Diameter of Column	80 mm
Table Size	290 x 290 mm
Table Tilt	45˚ - 0 - 45˚
Base Size	450 x 270 mm
Overall Size L x W x H	670 x 360 x 1,020 mm
Weight	82 kg

Code	107706
Model	AP700PD
Rating	Professional
Power	750W (230V 1ph)
Speed Range	(12) 120-2,580rpm
Throat	216 mm
Taper	3MT/B16
Chuck Cap/Type	1-16mm keyless
Chuck Travel	80 mm
Max Chuck to Table	700 mm
Max Chuck to Base	1,150 mm
Diameter of Column	80 mm
Table Size	345 x 345 mm
Table Tilt	45˚ - 0 - 45˚
Base Size	520 x 320 mm
Overall Size L x W x H	750 x 430 x 1,650 mm
Weight	92 kg

Code	107707
Model	AP540PD
Rating	Professional
Power	1100W (230V 1ph)
Speed Range	(12) 150-2,700rpm
Throat	254 mm
Taper	3MT
Chuck Cap/Type	3-16mm keyless
Chuck Travel	120 mm
Max Chuck to Table	540 mm
Max Chuck to Base	1,090 mm
Diameter of Column	92 mm
Table Size	475 x 425 mm
Table Tilt	45˚ - 0 - 45˚
Base Size	580 x 450 mm
Overall Size L x W x H	860 x 610 x 1,710 mm
Weight	143 kg

Having unpacked your machine and its accessories, please check the contents against the equipment list "What's Included", if there are any discrepancies, please contact Axminster Tool Centre using the procedures laid down on our website.

PLEASE DISPOSE OF THE PACKAGING RESPONSIBLY; MUCH OF THE MATERIAL IS RECYCLABLE

The machine and its accessories will arrive coated with heavy corrosion preventative grease and greased wax paper or plastic wrapping. These will need to be cleaned from the machine, its components and accessories prior to it being set up and commissioned. Use water soluble de greaser to remove the barrier grease. Be warned, it will stain if you splash it on clothing etc. After cleaning, lightly coat the exposed metal surfaces of the machine with a thin layer of light machine oil. N.B If you used water soluble de greaser make sure you apply this thin film sooner rather than later.

WARNING! WEAR OVERALLS, RUBBER GLOVES AND EYE PROTECTION!

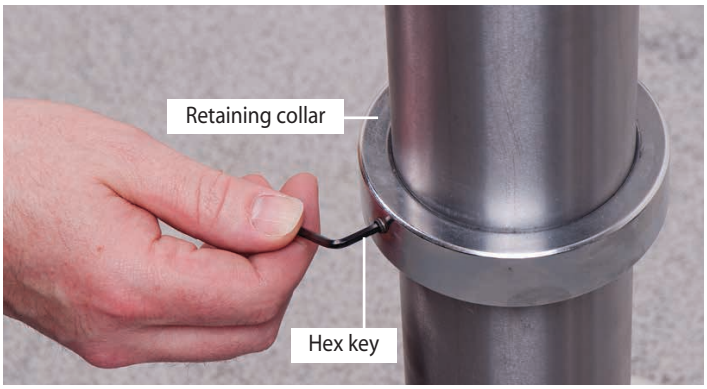
Please read the Instruction Manual prior to using your new machine; as well as the installation procedure, there are daily and periodic maintenance recommendations to help you keep your machine on top line and prolong its life. Keep this instruction manual readily accessible for any others who may also be required to use the machine.

WARNING! THE DRILL HEAD IS A HEAVY AND SUBSTANTIAL PIECE OF MACHINERY, YOU ARE ADVISED TO HAVE HELP TO LIFT IT CLEAR OF THE BOX AND FIT IT TO THE COLUMN.

1. Place the base (5) on the bench or floor and place the mounting flange of the column (1) onto the seating flange of the base (5), align the holes. Use the four Hex bolts (16) and secure the column to the base, see fig 01. Loosen the grub screw holding the chamfered retaining collar on the column with the supplied Hex key, place it and the rise and fall rack assembly aside, see fig 02.

Fig 01

Fig 02



2. Locate the drill table mounting bracket arm (2), apply some greese to the worm and pinion gears then twist the worm drive shaft with your fingers so that the whole shaft protrudes from the casting and the worm gear itself is clear of the square recess in the main body of the casting, see fig 03-04-05.

Fig 03-04-05

3. Pick up the rise and fall gear rack, identify the top and the bottom, (the rack gearing is cut asymmetrically, with the gear cut extending closer to the bottom), make sure you have the rack the right way up, as it will allow you to drive the drill table up and down over its full range, see fig 06.

Fig 06

4. Fit the rise and fall rack into the square recess in the mounting bracket arm (2) casting, ensure that it is engaged with the pinion, see fig 07. Lower the combined mechanism over the column. Allow it to slide down the column until the rise and fall rack is located in the cup chamfer in the top of the mounting flange, see fig 08. Replace the cup chamfered retaining collar over the column and slide it down onto the top of the rack. Lock it in place with the grub screw, ensuring that it has captured the upper end of the rack securely, but not too tight that the rack cannot be swivelled around the pillar see fig 09.

Fig 07-08

Fig 09

5. Locate and fit the crank handle (10) to the shaft, ensuring that you tighten the grub screw onto the machined flat on the shaft, this will keep the worm gear in position, see fig 10-11.

Fig 10-11

6. Check that the mounting bracket can be driven up and down the column and can swivel around the pillar. Locate the lift and shift handle (8) and screw it into the threaded hole to the rear of the mounting bracket arm and tighten, see fig 12. **DO NOT OVERTIGHTEN as the cast iron arm could break.** Check it has 'pinched' up on the column and the bracket is immobile; both in its up and down travel and swivel movement.

Fig 12

Continues Over....

Fig 13-14-15

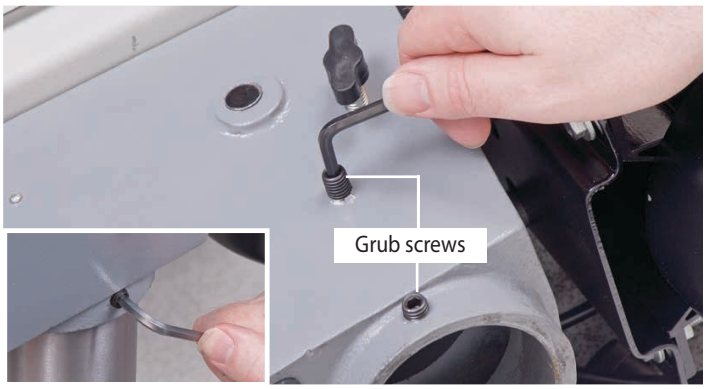
7. Screw in the remaining lift and shift handle (8) into the threaded hole to the end of the mounting arm. **DO NOT OVERTIGHTEN as the cast iron arm could break.** Lower the drill table (4,4a,4b) spigot into the machined hole to the front of the mounting arm and tighten the handle until it has 'pinched' up on the drill table's spigot and the table is immobile, see fig 13-14-15.

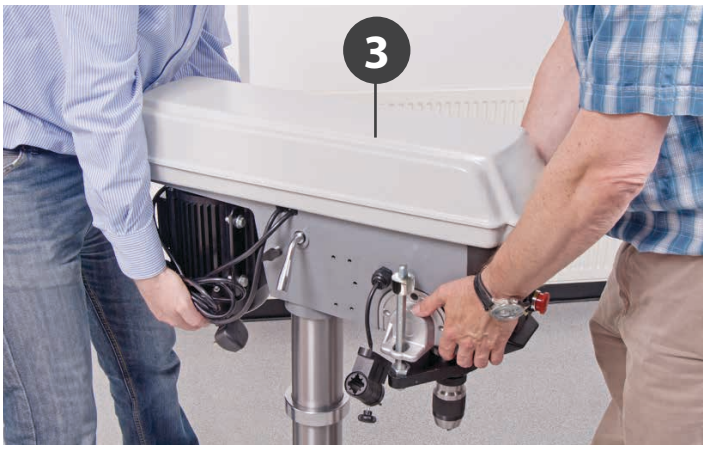
Mounting the Drill Head

WARNING! THE DRILL HEAD IS A HEAVY AND SUBSTANTIAL PIECE OF MACHINERY, YOU ARE ADVISED TO GET HELP TO LIFT IT CLEAR OF THE BOX AND ONTO THE COLUMN.

1. CHECK the drill head, ensure that the two hex socket grub screws that lock the head in place on the column are withdrawn and will not foul on the column when the head is fitted, see fig 17. Place the assembly you have just been working on in the designated position, make sure it is stable and lift the drill head over the column and let it drop into place, see fig 18. Set the drill head approximately fore and aft and lock in position using the two cap head grub screws mentioned earlier, see fig 19. Check that the drill head is immobile. Everything on the drilling machine is now secured.

Fig 17-18-19

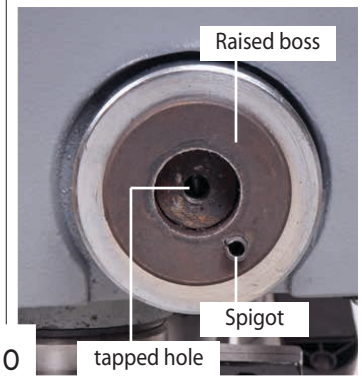


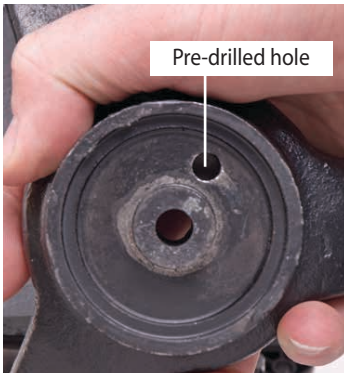


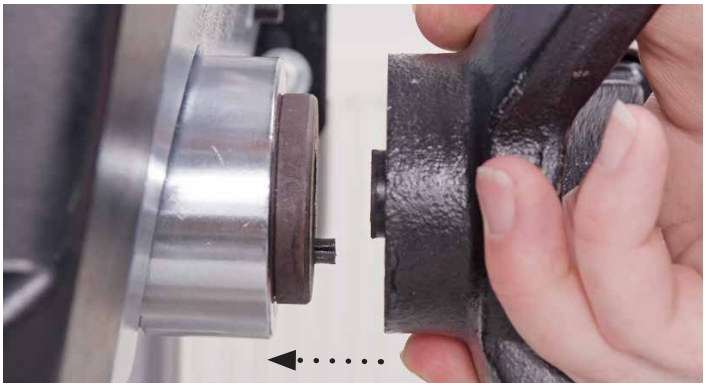
Lever Feed Handle

2. Locate the lever feed handle and its securing cap head bolt/washer (9), note the raised boss and spigot on feed mechanism. Mount the handle over the boss and ensure the spigot slots into the pre-driiled hole in the feed handle assembly. Secure with the supplied cap head bolt through the hole in the centre of the handle, through into the tapped hole in the mounting boss, see fig 20-21-22-23.

Fig 20-21-22-23



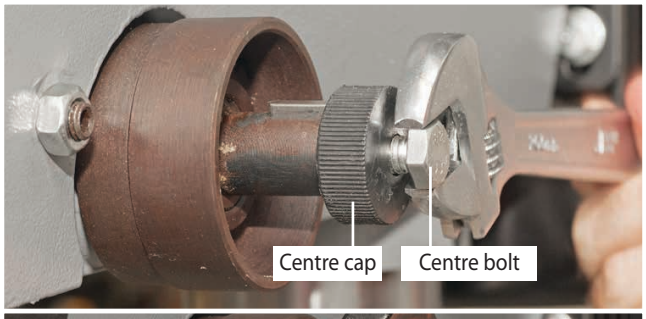


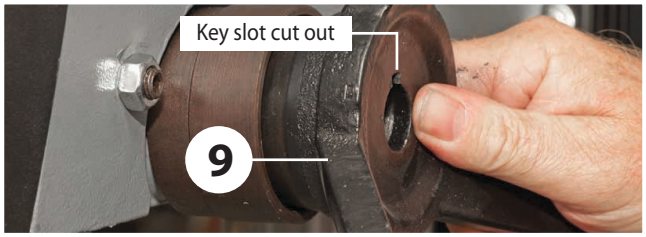


Lever Feed Handle (AP540PD ONLY)

Locate the lever feed handle (9), remove the centre bolt and unscrew the centre cap from the raised boss drive shaft, place safely aside, see fig 24. Remove the square key from the machined slot on the drive shaft. Mount the handle over the drive shaft so the square cut out on the handle lines up with machined slot in the shaft. Replace the square key, screw on the centre cap and secure the handle in place with the centre bolt, see fig 25-26.

Fig 24-25-26





Pulley Cover Knob

3. Locate the pulley cover knob (13), remove the Phillips screw, insert the screw through the pre-drilled hole in the pulley cover and secure the knob in place, see fig 27.

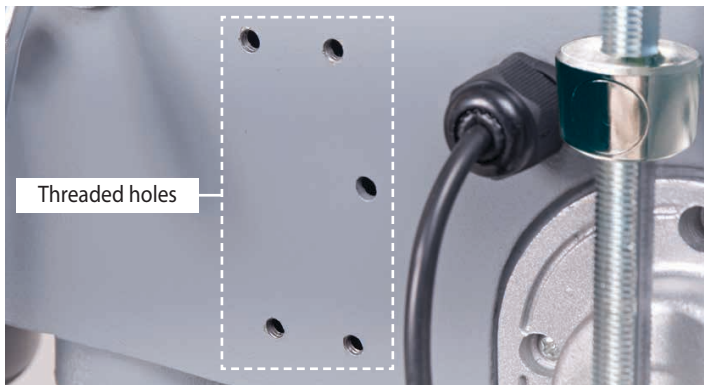
Fig 27

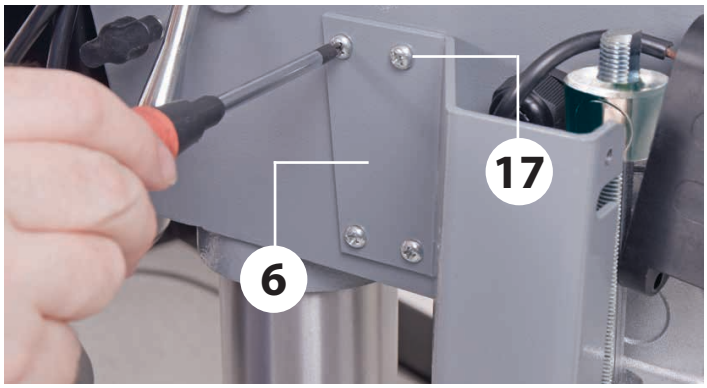
Chuck guard

4. Locate the chuck guard assembly (7), chuck guard mounting bracket (6) and the four M6 button head Phillips screws (17). Offer up the four pre-drilled holes in the mounting bracket (6) with threaded holes to the side of the drill head assembly (3). Secure in position with the four M6 screws (17), see fig 28-29

NOTE: Make sure the cutout slot in the mounting bracket (6) is to the top.

Fig 28-29

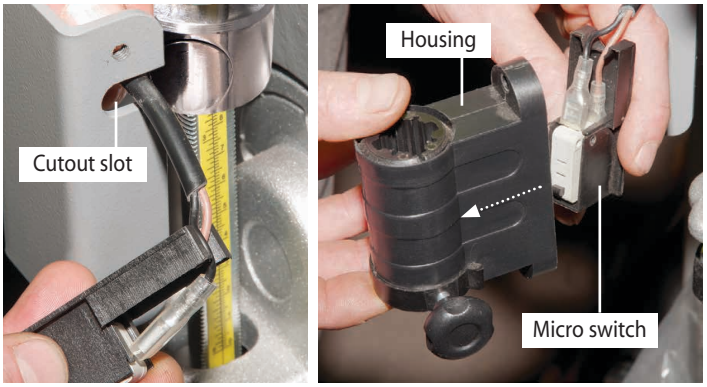




5. Insert the micro switch cable into the machined cutout slot in the mounting bracket (6). Press the switch assembly into the rear of the micro switch housing as shown, see fig 30.

Continues Over....

Fig30



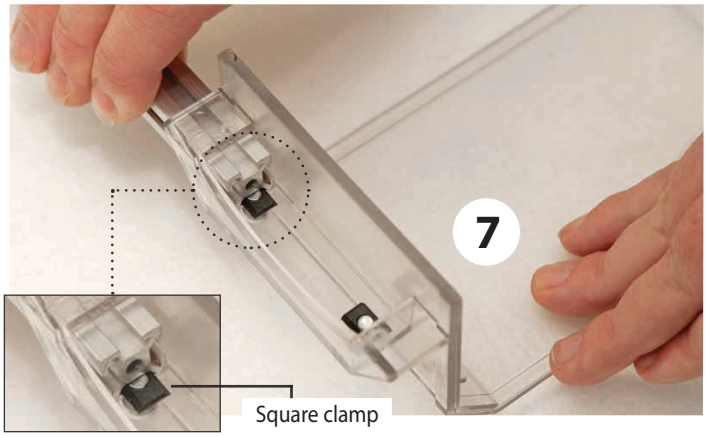
6. Line up the two holes in the micro switch unit with the threaded holes to the end of the angled bracket (6). **Make sure to introduce the micro switch cable into the cutout slot in the mounting bracket (6).** Secure the micro switch with two M5 Phillips screws (18), see fig 31.

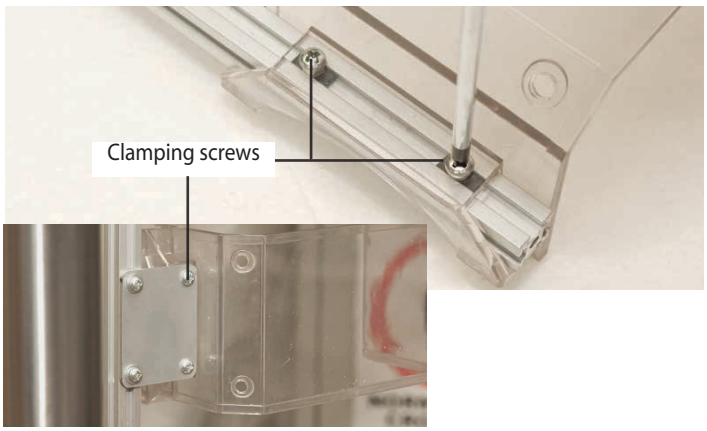
Fig 31

7. Undo the clamping knob to the side of the micro switch sufficiently to allow the guard rail to slide up through the centre of switch.

8. Locate the chuck guard and rail assembly (7). Turn the guard over and slot the rail into the guard's mounting channel, insert the two square clamps into the rail's 'T' slot and secure by nipping up the Phillips screws. **DO NOT OVERTIGHTEN** to avoid the plastic guard from cracking, see fig 32-33-34.

Fig 32-33-34

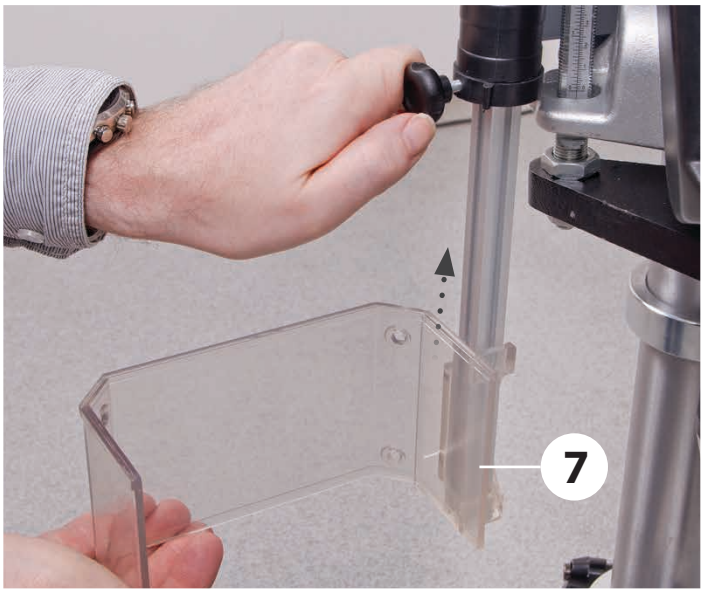




9. Introduce the chuck guard rail (7) up through the centre of the micro switch and nip up the clamping knob to lock the chuck guard in place, see fig 35.

NOTE: You can re-adjust the guard's height for different drilling operations.

Fig 35



Morse taper arbor and chuck

10. Locate the keyless chuck (11) and Morse taper arbor (12). Insert the Morse taper arbor into the keyless chuck then slot the assembly up into the quill. **NOTE: DO NOT FORCE THE MORSE TAPER IN, OTHERWISE THE QUILLS SPLINE SHAFT WILL BE DAMAGED!** Place a piece of timber on the table, turn the lever feed handle (9) down until the chuck is up against the timber and press lightly down. The Morse taper (12) should now be locked inside the quill, see fig 36-37-38.

Fig 36

NOTE: MAKE SURE ALL MATING SURFACES ARE CREASE FREE BEFORE ASSEMBLY!

Fig 37

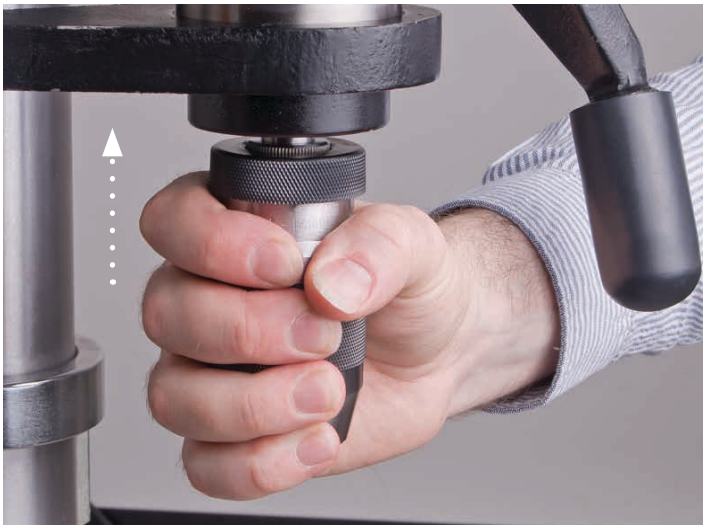


Fig 38

11. Open the pulley cover and check to see if the belt has been tensioned. If not, loosen the two motor yoke locks on either side of the drill head and move the tensioning lever back then re-tighten the motor yoke locks to lock the motor in place, see fig 39-40-41-42.

Fig 39-40-41-42

107704 **AP340PD**

107705 **AP325PD**

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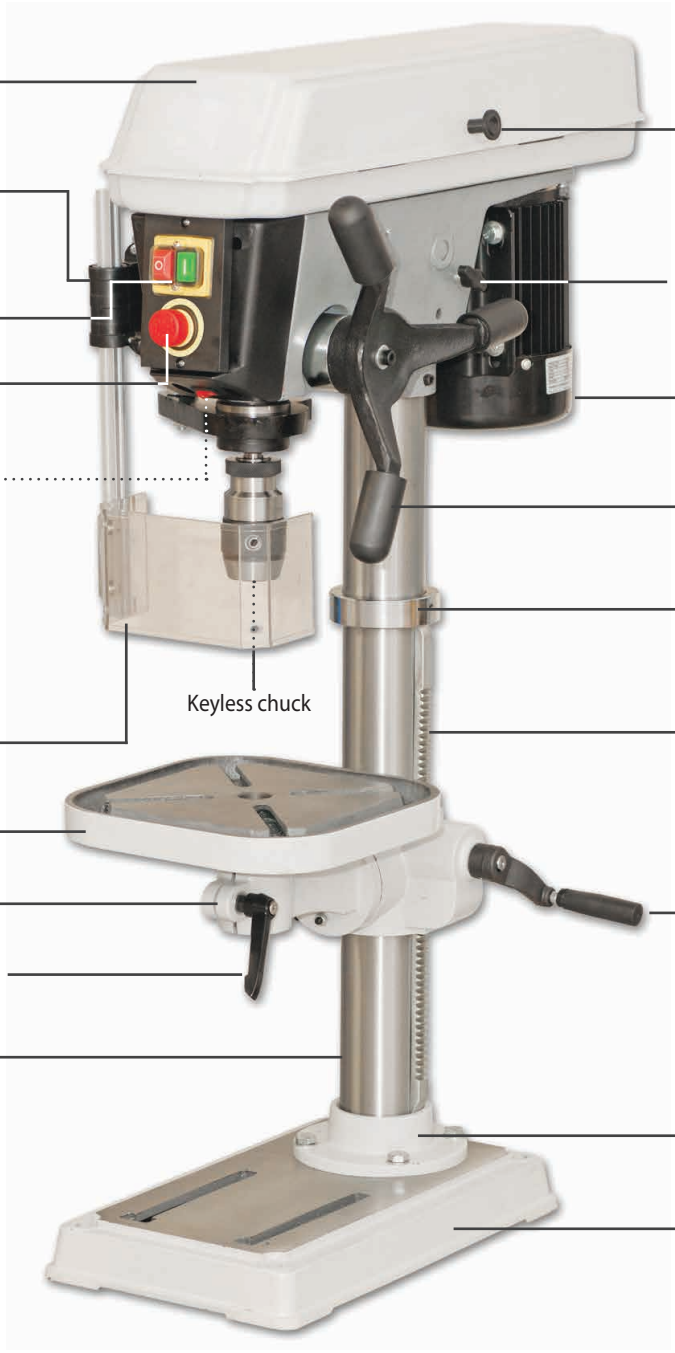
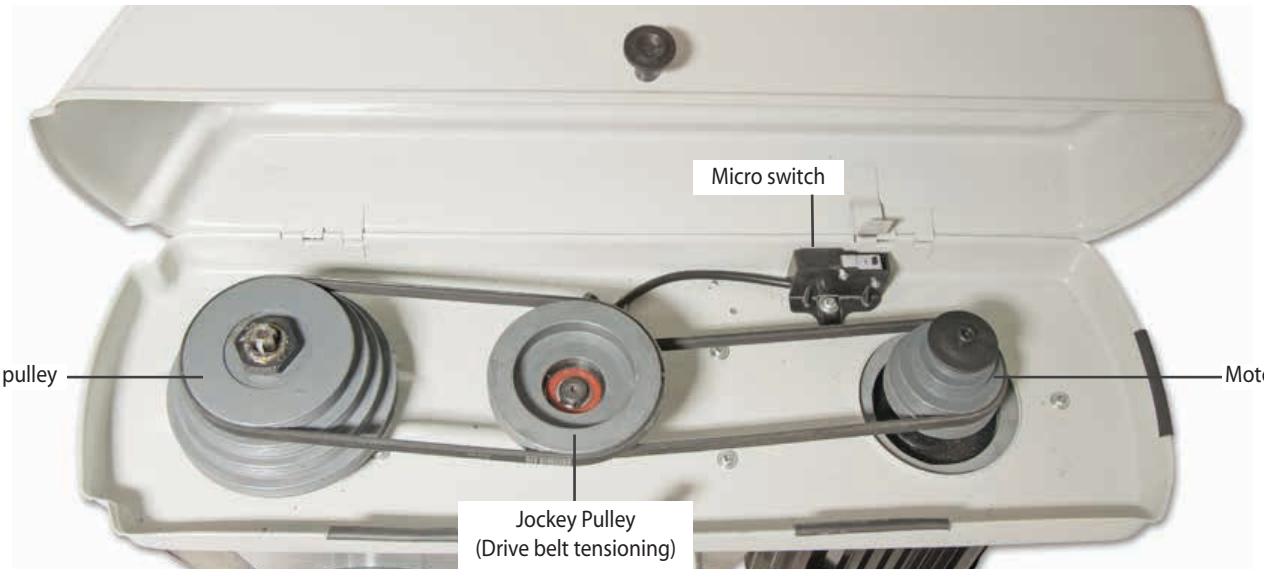
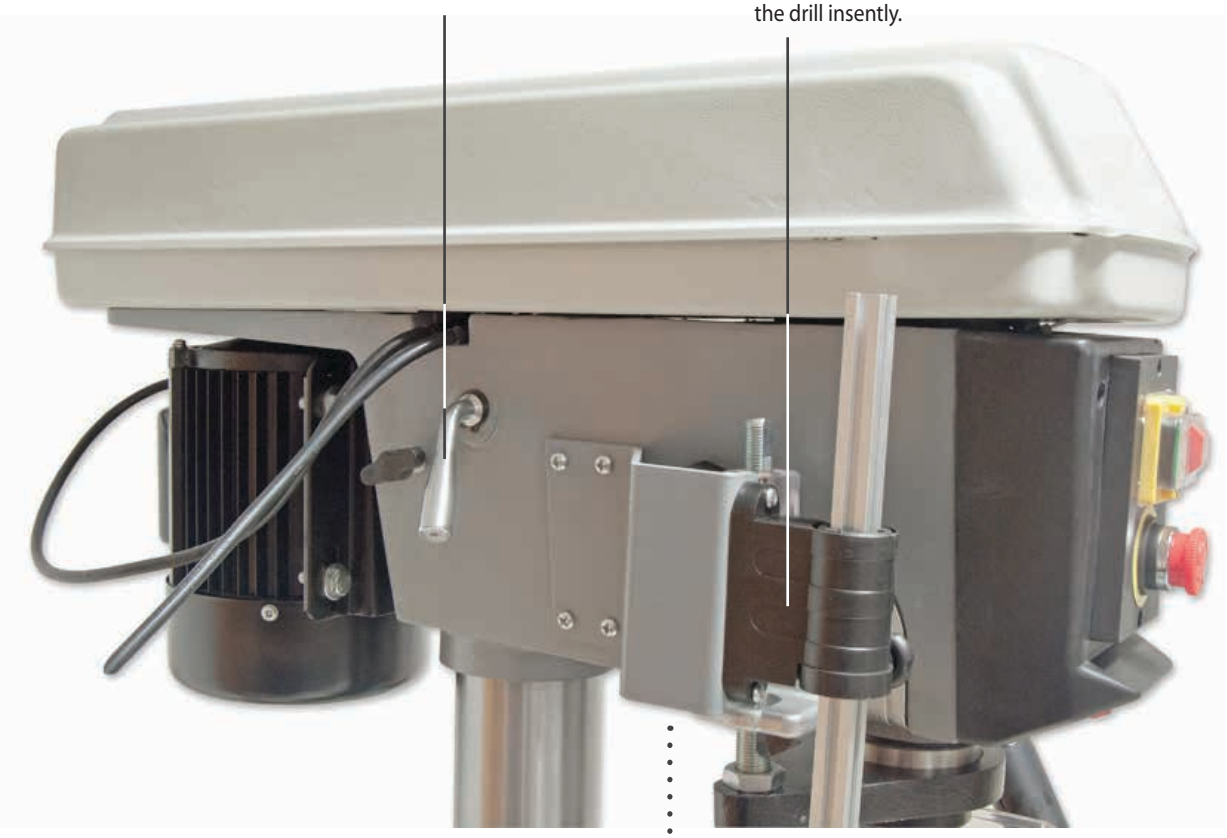

Pulley drive belt cover
Pulley cover hand knob
Chuck guard micro switch
Motor yoke butterfly locking
On/Off switch
Emergency stop Button
Motor
Lever feed handle
LED Light switch
Retaining collar
Keyless chuck
Chuck guard
Rise and fall rack
Drill table
Extension bracket arm
Crank handle
Lift and shift clamping handle
Drill column
Mounting flange
Base casting

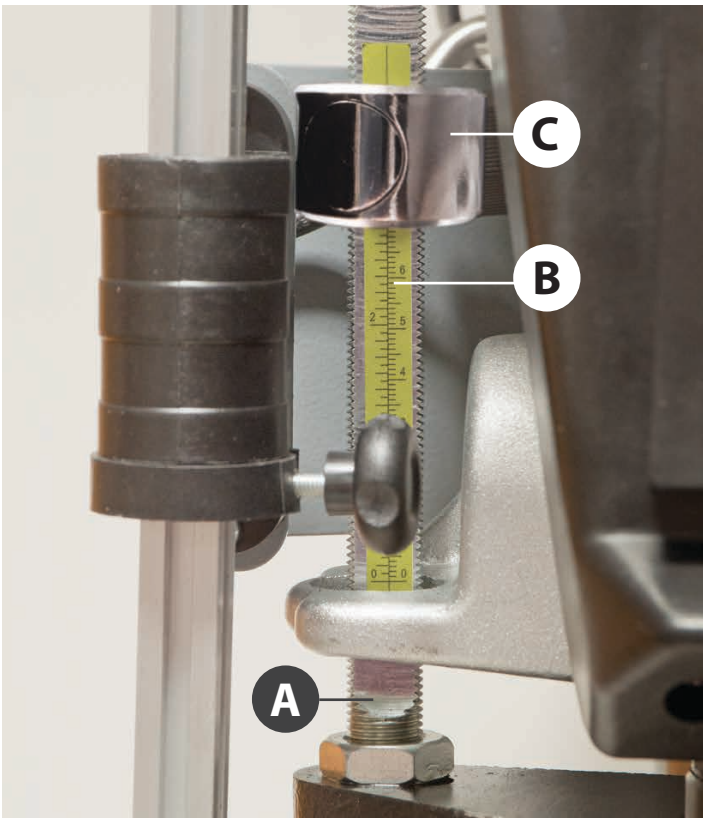

Micro switch
Quill pulley
Motor pulley
Jockey Pulley
(Drive belt tensioning)

Drive belt tensioning lever lock
Move the tensioning lever to release or tension the drive belts

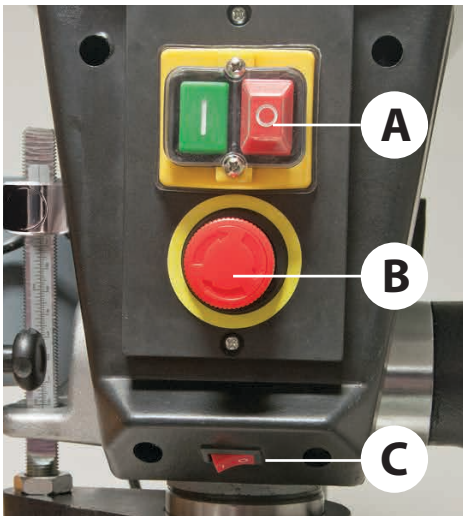
Chuck guard micro switch
Opening the chuck guard whilst in operation will stop the drill insently.



LED light (A) below the drill head pivots to direct light down onto the work table

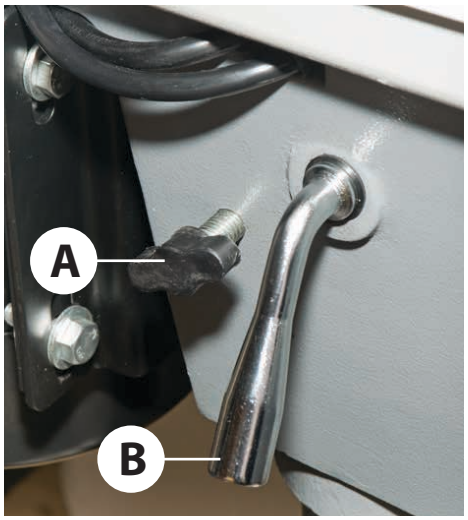


Depth stop assembly (A), Depth stop scale (B)and Depth stop collar (C), press the sprung loaded button to repostion the collar on the depth stop scale

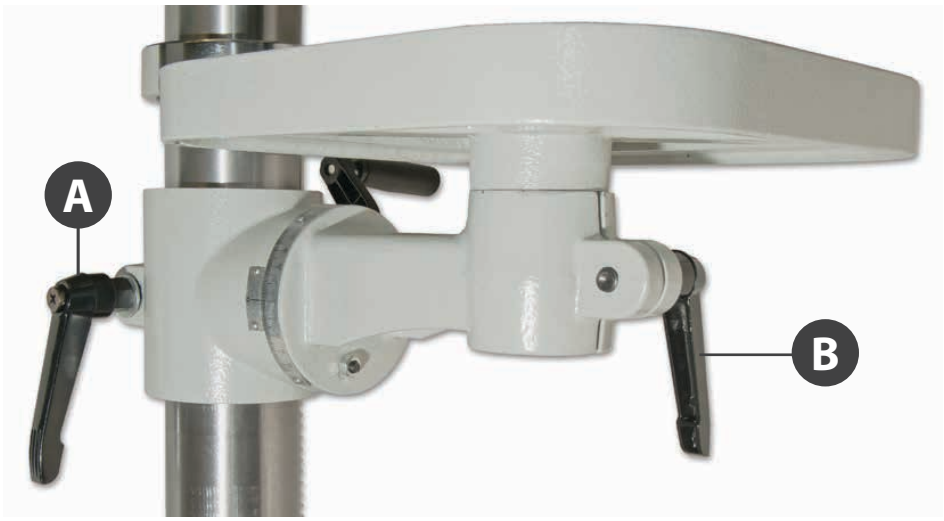


On/Off switch (A)
Emergency stop button (B)
LED light switch (C)

AP540PD pillar drill control panel
NOTE: The LED light switch is above the On/Off switch assembly



Motor yoke butterfly lock (A)
Drive belt tensioning lever lock (B)



Lift and shift handle (A) for securing the table mounting arm
Clamping handle (B) for securing the table

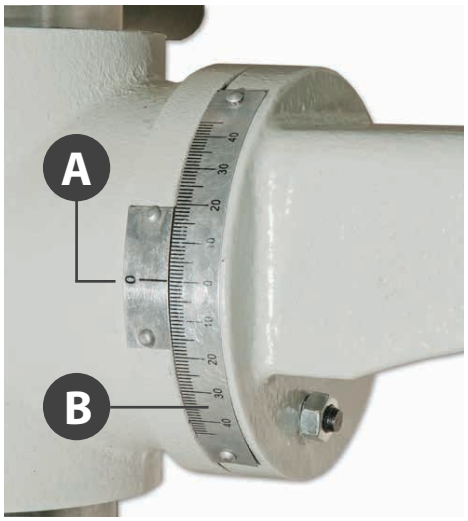


Table tilt pointer (A)
Table tilt scale (B)

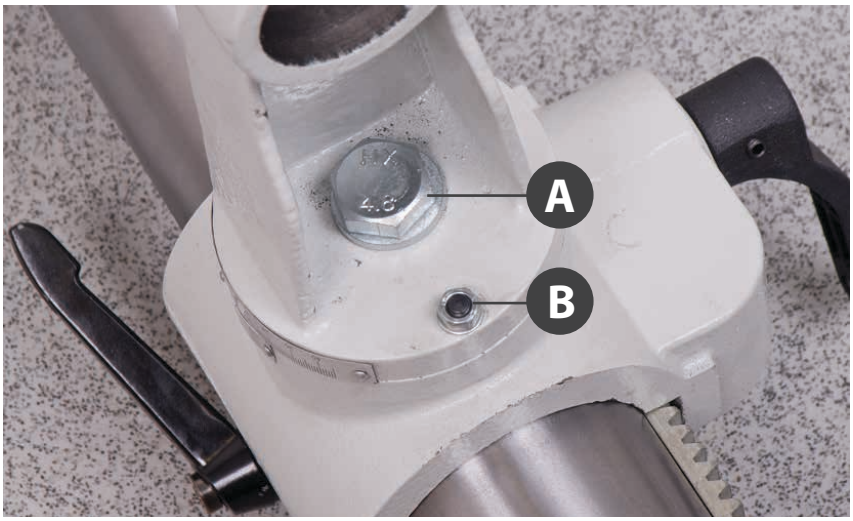
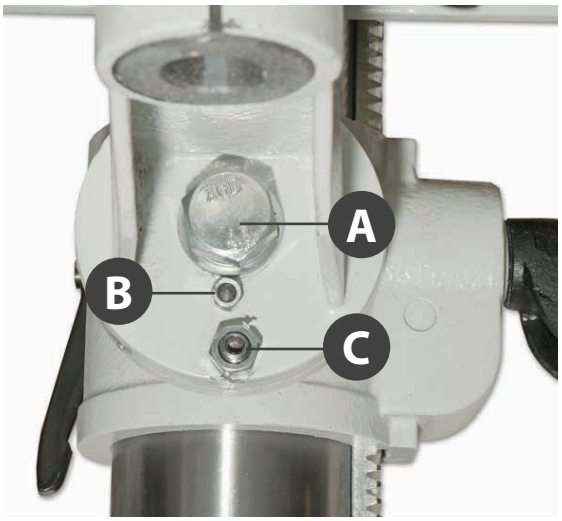


Table tilt clamping bolt (A), 90˚ degrees locking pin (B)



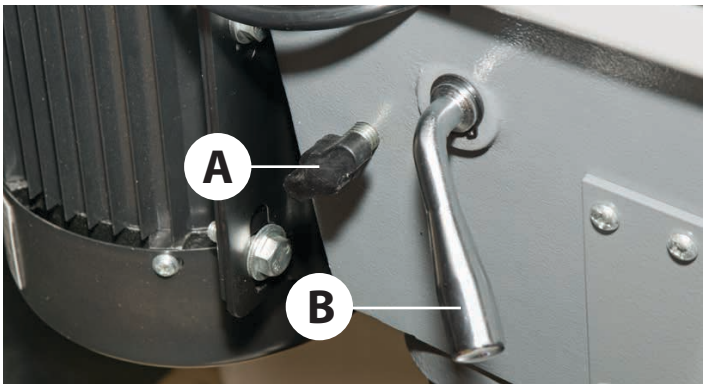
AP540PD Pillar drill table tilt assembly
Table tilt clamping bolt (A)
90˚ degree locking pin (B)
Table levelling adjusting nut (C)

CHANGING THE SPEED

WARNING! DISCONNECT THE PILLAR DRILL FROM THE MAINS SUPPLY BEFORE CONTINUING!

1. Open the pulley cover and loosen the motor yoke locks (A). Turn the drive belt tensioning lever (B) anti-clockwise, to move the motor assembly "in". This will release the tension from the drive belts, see fig 43.

Fig 43

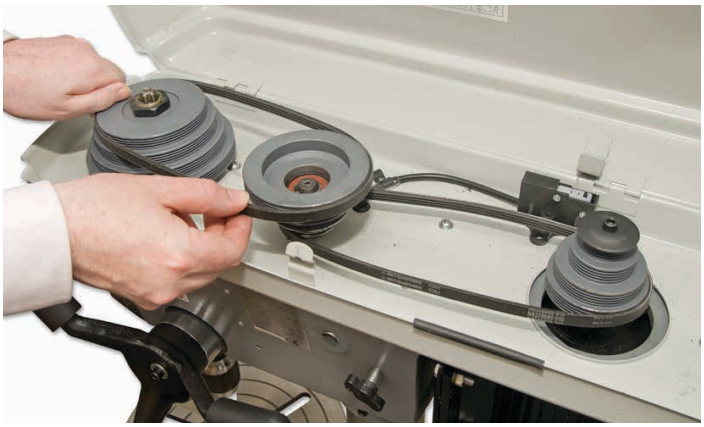


2. Refer to the speed select table and ascertain the belt positions for the speed you require. Move the belts to these positions.

WARNING! TAKE CARE NOT TO TRAP YOUR FINGERS WHEN REPOSITIONING THE BELT ON THE PULLEYS!

3. Turn the pulley train,see fig 44, to check the belts move freely. Tension the whole belt train by turning the drive belt tensioning lever (B) anti-clockwise, to move the motor assembly "out". Tighten the motor yoke butterfly knobs (A) to lock the motor assembly in position.

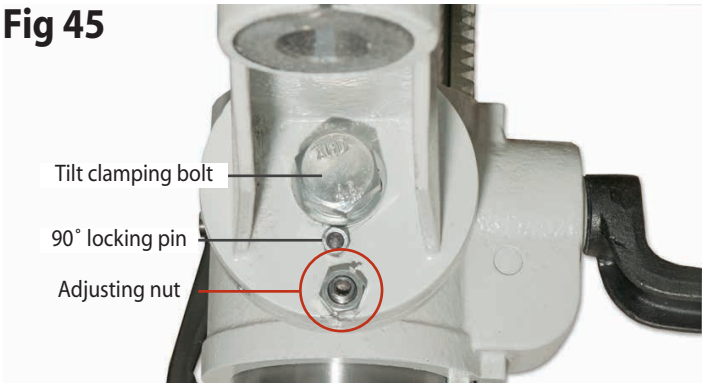
Fig 44



LEVELLING THE TABLE (AP540PD ONLY)

The 'AP540PD pillar drill' come with a large heavy cast iron table and there is more chance that the table will need to be adjusted so it's perpendicular with the motion of the quill. To do this there is an adjusting nut on the supporting arm below the 90˚ locking pin, see fig 45.

Fig 45



1. Position the centre of the table directly beneath the pillar drill's chuck and lock the table in place. The table should be about 200mm beneath the bottom of the chuck, find a perfectly cylindrical steel rod about 12.5mm in diameter and insert it into the chucks jaws and tighten.

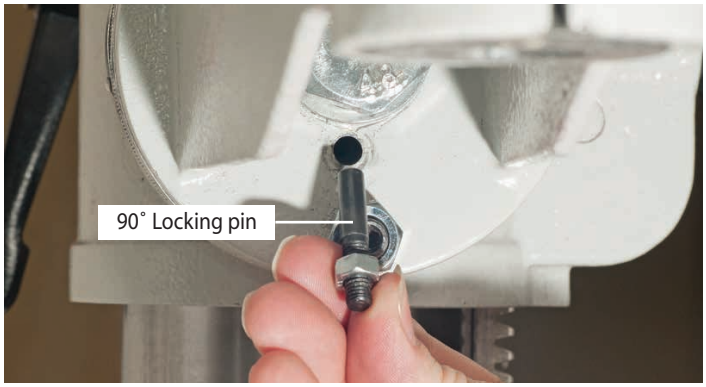
2. Position a 90˚ square on the table and line it against the steel rod. If you notice any unevenness between the table and the rod, loosen the tilt clamping bolt and turn the adjusting nut until the table is square with the drill chuck. Tighten the clamping bolt to lock the table in place, see 46-47.

Fig 46-47

1. The cust iron table can be tilted 45˚ degrees in both plains, to tilt the table you will need to first remove the tables 90˚ locking pin. To remove the locking pin use a 10mm spanner, turn the nut clockwise to draw the pin out. Remove the pin and place safely aside, see fig 48-49. Loosen the tilt clamping bolt and tilt the table to the desired angle then retighten the bolt.

Fig 48

Fig 49



2. To set the table back to 90˚ degrees, loosen the clamping bolt, position the table back in the horizontal plain and insert the locking pin into the machined hole in the support arm. Adjust the nut so it protects the end of the threaded pin and using a high faced mallet tap the locking pin into place.

1. Lower the quill to its maximum depth by turning the feed lever handle. While holding the handle adjust the lower depth stop nut (A) to lock the quill in position, see fig 50.

2. Place a piece of timber on the drill table to prevent the chuck from being damaged, turn the chuck to line up the Morse taper arbor in the quill's machined slot. Insert the Morse taper drift (14) in the quill's slot, thus pushing the Morse taper down and releasing the chuck assembly, see fig 51-52.

Fig 50

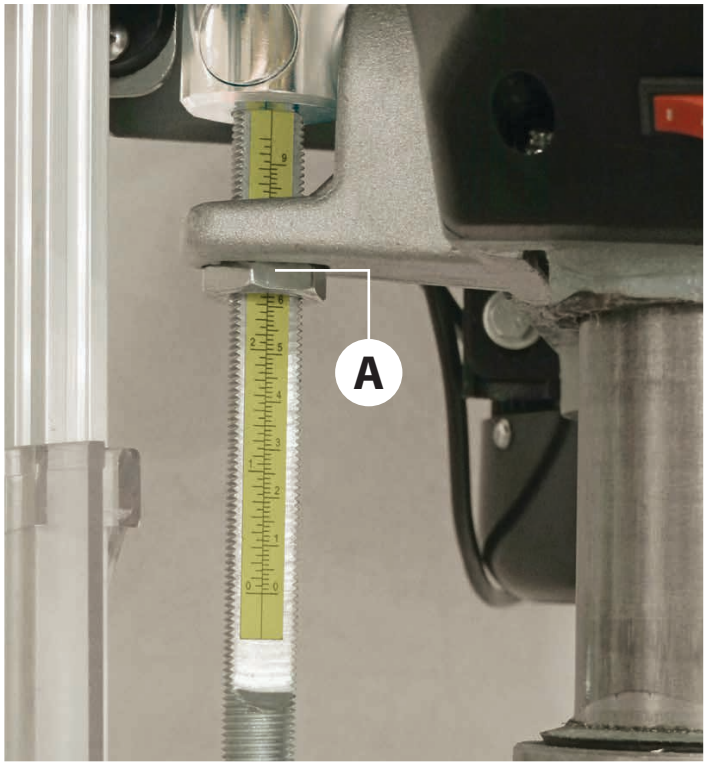
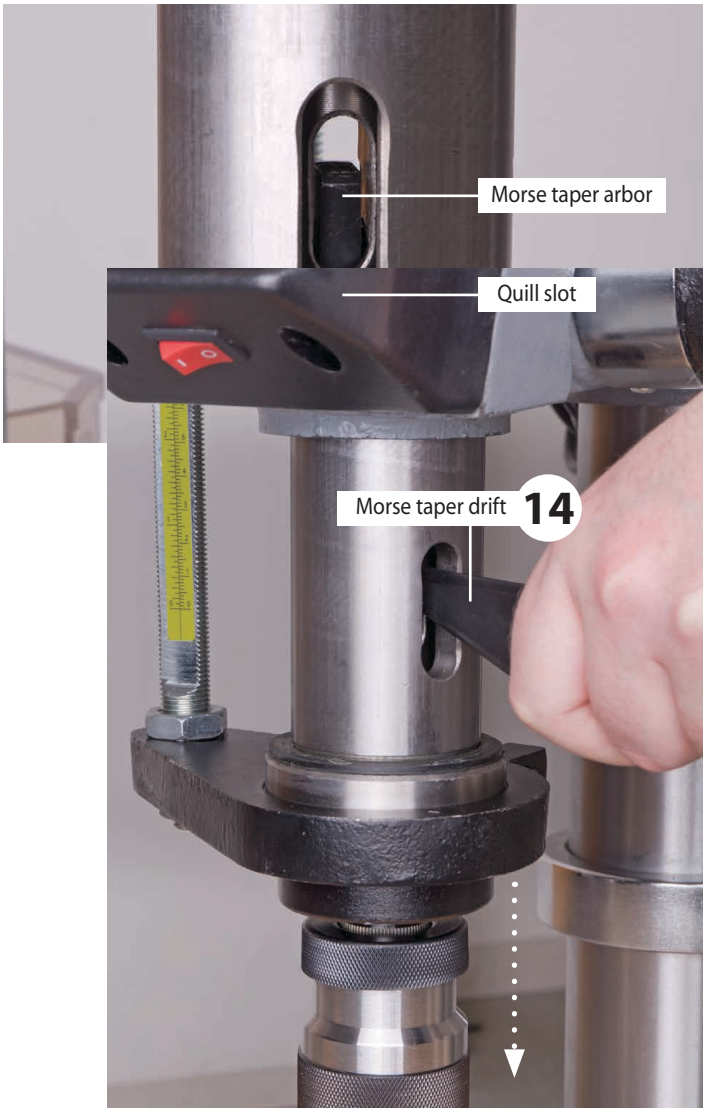


Fig 51-52



WARNING! DISCONNECT THE MACHINE FROM THE MAINS SUPPLY BEFORE CONTINUING!

Cleaning

Excessive dust in the motor can cause excessive heat to develop. Every effort should be made to prevent foreign material from entering the motor.

When operated under conditions likely to permit accumulations of dust, dirt or waste, a visual inspection should be made at frequent intervals. Accumulations of dry dust can usually be blown out successfully.

Caution: To avoid eye injury or adverse reaction to dust, high pressure hoses should not be used especially in poorly ventilated areas. The operator performing this cleaning function should wear safety goggles and dust filter mask.

After cleaning, apply a light coat of machine oil on the quill and chuck.

If the machine is going to stand idle for any length of time, a light coat of spray or machine oil over the column and table will prevent rusting. Then place a dust sheet over the pillar drill.

Electric

WARNING! DO NOT USE THE MACHINE IF THE POWER CABLE HAS BECOME DAMAGED.

If any servicing (other than the above cleaning) becomes necessary, the unit should be returned to Axminster Tools to be repaired by one of our qualified electricians. Contact our customer sales department for further assisance on 03332 406406 or email as @ csaxminstertools.com

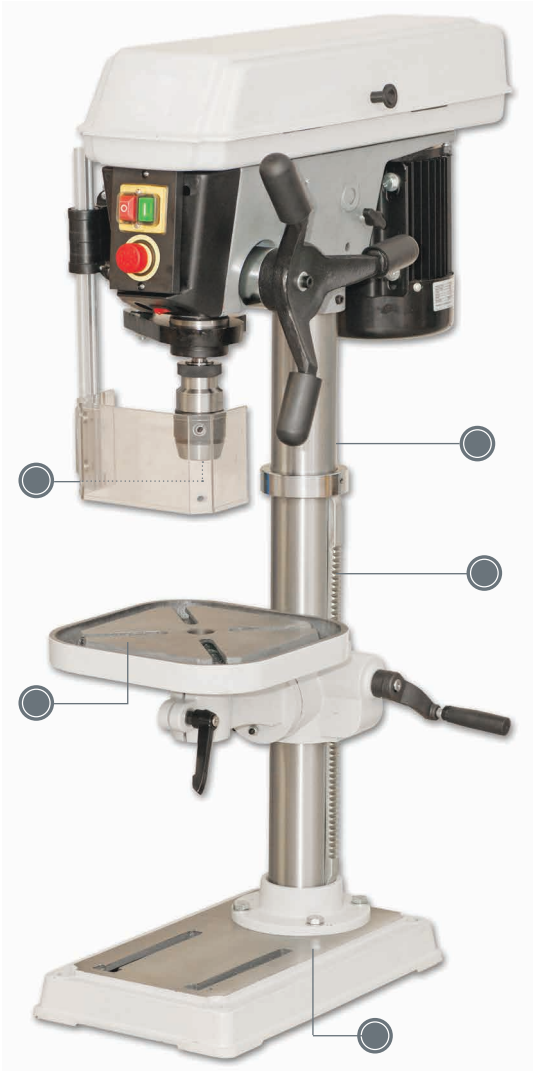
Call: 03332 406406
Email: cs@axminstertools.com

WARNING! DO NOT ATTEMPT TO REPAIR IT YOURSELF CONTACT OUR TECHNICAL SALES TEAM FOR ASSISTANCE.

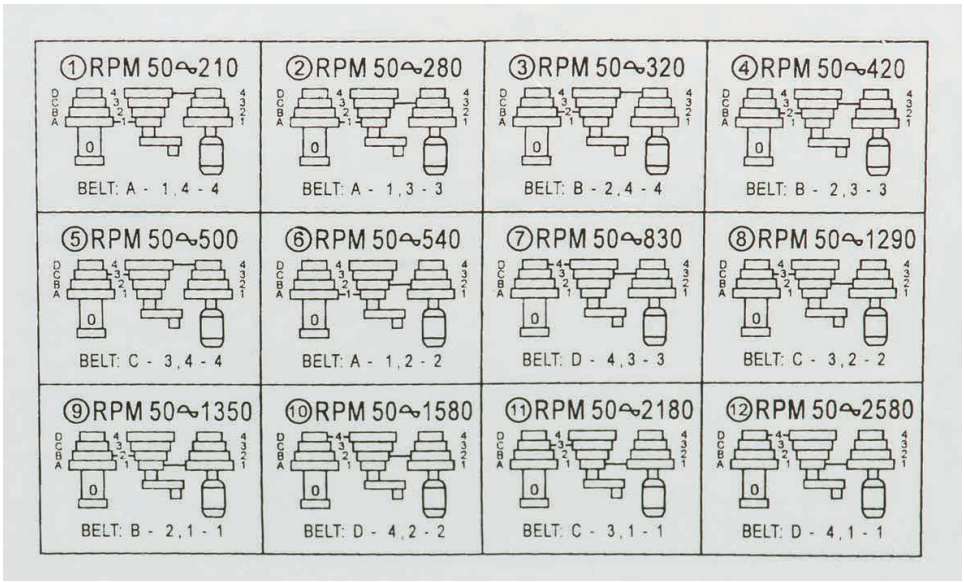
Motor speed

The speed of the motor cannot be regulated or changed - no adjustment is necessary.

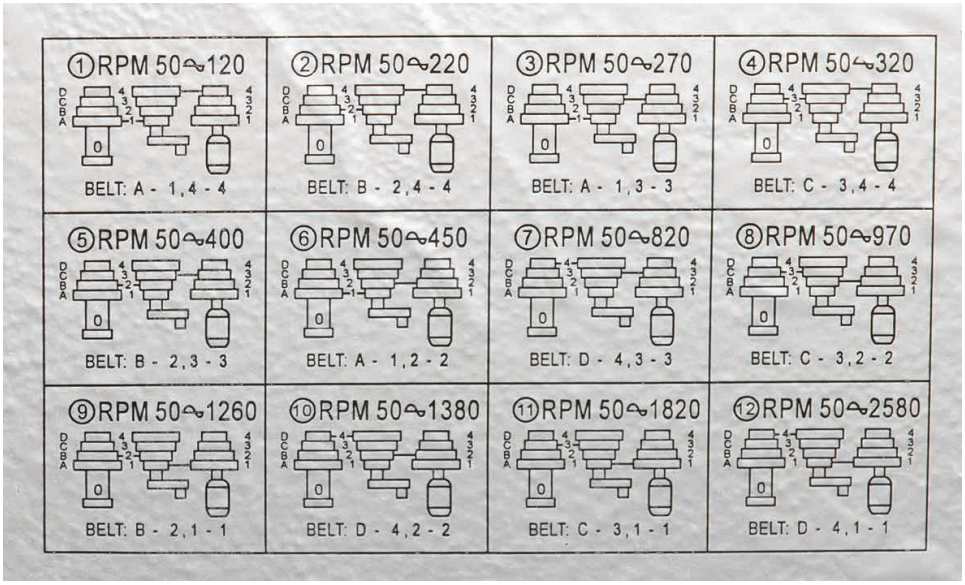
Oil Points



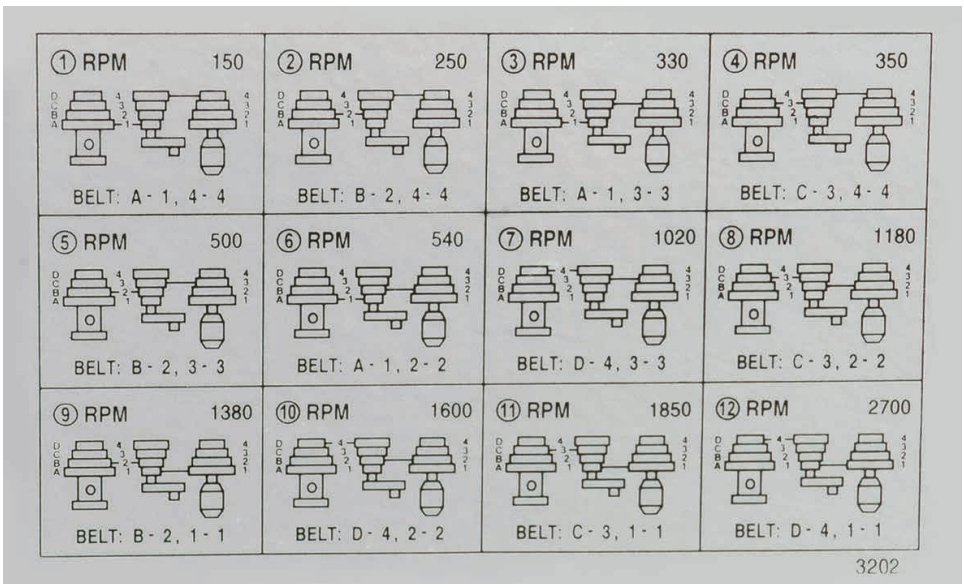
(12 Speed) **107704 AP340PD** Floor Pillar Drill



(12 Speed) **107705 AP325PD** Bench Pillar Drill **107706 AP700PD** Floor Pillar Drill

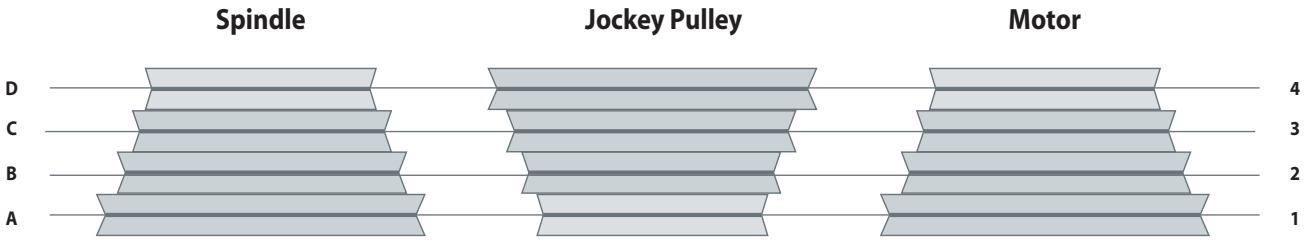


(12 Speed) **107707 AP540PD** Floor Pillar Drill



DRILL SPEED MATERIAL TABLE

12 Speed

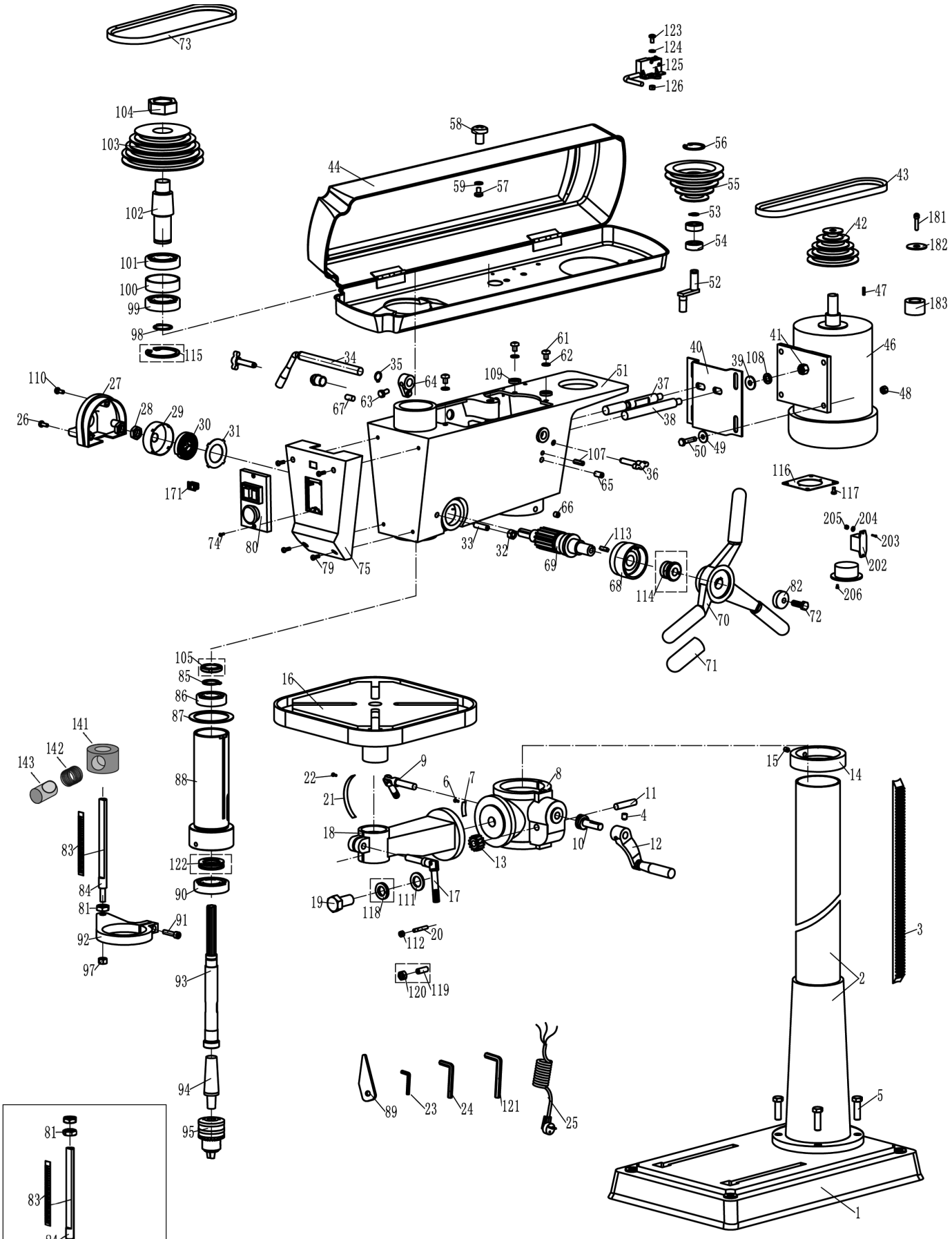


Recommended Drill Size per Material

Average Guide Speed	Wood		Zinc Diecast		Aluminium or Brass		Plastic		Cast Iron and Bronze		Steel Mild and Malleable		Steel Cast and Carbon		Steel Stanless and Tool	
50Hz	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
2450-2500-2580 rpm	5/16"	7.9	3/16	4.8	11/64	4.4	5/32	4.0	7/16	2.8	3/32	2.4	1/16	1.6	1/32	0.8
1580-1750-1870 rpm	3/8	9.5	1/4	6.4	7/32	5.6	3/16	4.8	1/8	3.2	3/32	2.4	1/16	1.6	3/64	1.2
1250-1290-1330 rpm	5/8	15.9	3/8	9.5	11/32	8.7	5/16	7.9	1/4	6.4	5/32	4.0	1/8	3.2	1/16	1.6
790-830-900 rpm	7/8	22.2	1/2	12.7	15/32	11.9	7/16	11.1	11/32	8.7	1/4	6.4	3/16	4.8	1/8	3.2
500-540-600 rpm	1 1/4	31.8	3/4	19	11/16	17.5	5/8	15.9	1/2	12.7	3/8	9.5	5/16	7.9	1/4	6.4

TROUBLE	PROBABLE CAUSE	REMEDY
Noisy Operation	1. Incorrect belt tension 2. Dry spindle 3. Loose spindle pulley 4. Loose motor pulley	1. Adjust the tension 2. Lubricate spindle 3. Checking tightness of retaining nut on pulley, and tighten if necessary 4. Tighten set screws in pulleys
Drill bit burns	1. Incorrect speed 2. Chips not coming out of hole 3. Dull drill bit 4. Feeding too slow 5. Not lubricated	1. Change speed 2. Retract drill bit frequently to clear chips 3. Resharpen drill bit 4. Feed fast enough-allow drill bit to cut. 5. Lubricate drill bit
Drill bit leads off hole not round	1. Hard grain in wood or lengths of cutting lips and/or angles not equal 2. Bent drill bit	1. Resharpen drill bit correctly 2. Replace drill bit
Wood splinters on underside	1. No "back-up material" under workpiece	1. Use "back-up material"
Work piece torn loose from hand	1. Not supported or clamped properly	1. Support work piece or clamp it
Drill bit binds in work piece	1. Work piece pinching drill bit or excessive feed pressure 2. Improper belt tension	1. Support work piece or clamp it 2. Adjust tension
Excessive drill bit run out or wobble	1. Bent drill bit 2. Worn spindle bearings 3. Drill bit not properly installed in chuck 4. Chuck not properly installed	1. Use a straight drill bit 2. Replace bearings 3. Install drill bit properly 4. Install chuck properly
Quill returns too slow or too fast	1. Spring has improper tension	1. Adjust spring tension
Chuck will not stay attached to spindle it falls off when trying to install it	1. Dirty, grease or oil on the tapered inside surface of chuck or on the spindle's tapered surface	1. Make sure all surfaces are free of dust and grease

EXPLODED DIAGRAM/PARTS LIST



MODEL: (ZQJ4132K) AP540PD

PART NO	DESCRIPTION	QTY
1	BASE	1
2	COLUMN	1
3	RACK	1
4	HEX SCREW	1
5	BOLT	4
6	RIVET	2
7	0 SCALE	1
8	GRIPPING SLEEVE	1
9	LOCKING HANDLE	1
10	WORM	1
11	SMALL SHAFT	1
12	ROCKER	1
13	BEVEL WHEEL	1
14	COLLAR	1
15	SCREW	1
16	TABLE	1
17	LOCKING HANDLE	1
18	ARM	1
19	BOLT	1
20	PIN	1
21	ANGLE SCALE	1
22	RIVET	2
23	WRENCH	1
24	WRENCH	1
25	POWER CORD	1
26	BOLT	1
27	SIDE COVER	1
28	NUT	2
29	SPRING SEAT	1
30	SPRING	1
31	WASHER	1
32	NUT	1
33	HEX HEAD SCREW	1
34	HANDLE FOR TENSION	1
35	CHECK RING	1
36	HANDLE	2
37	INITIATIVE GUIDE ROD	1
38	DRIVEN GUIDE ROD	1
39	WASHER 12	2
40	MOTOR BASE	1
41	NUT M12	2
42	DRIVER PULLEY	1
43	BELT	1
44	BELT COVER	1
45		
46	MOTOR	1
47	FLAT KEY	1
48	NUT M8	4
49	WASHER 8	4
50	BOLT	4
51	CAST BODY	1
52	IDLE PULLEY SHAFT	1
53	CHECK RING	1
54	BEARING	1
55	IDLE PULLEY	1
56	CHECK RING	1
57	BOLT	1
58	HANDLE	1
59	WASHER	1
61	BOLT	4
62	WASHER	4
63	BOLT M8X16	1
64	SHIFTING FORK	1
65	HEX SOCKET TACKING	1
66	HEX SOCKET TACKING	1
67	HEX SOCKET TACKING	1
68	COVER	1
69	GEAR SHAFT	1
70	HANDLE ASSEMBLY	1
71	HANDLE COVER	3
72	BOLT	1
73	BELT	1
74	SCREW	3
75	SWITCH BOX	1
79	BOLT	4
80	SWITCH	1
81	NUT	1
81	NUT (MODEL: ZQJ4132K)	3
82	WASHER	1
83	DEPTH SCALE	1
84	SCALE SEAT	1
85	WASHER	1
86	BEARING	1
87	RUBBER PAD	1
88	SLEEVE	1
89	DRIFT	1
90	BEARING	1
91	BOLT	1

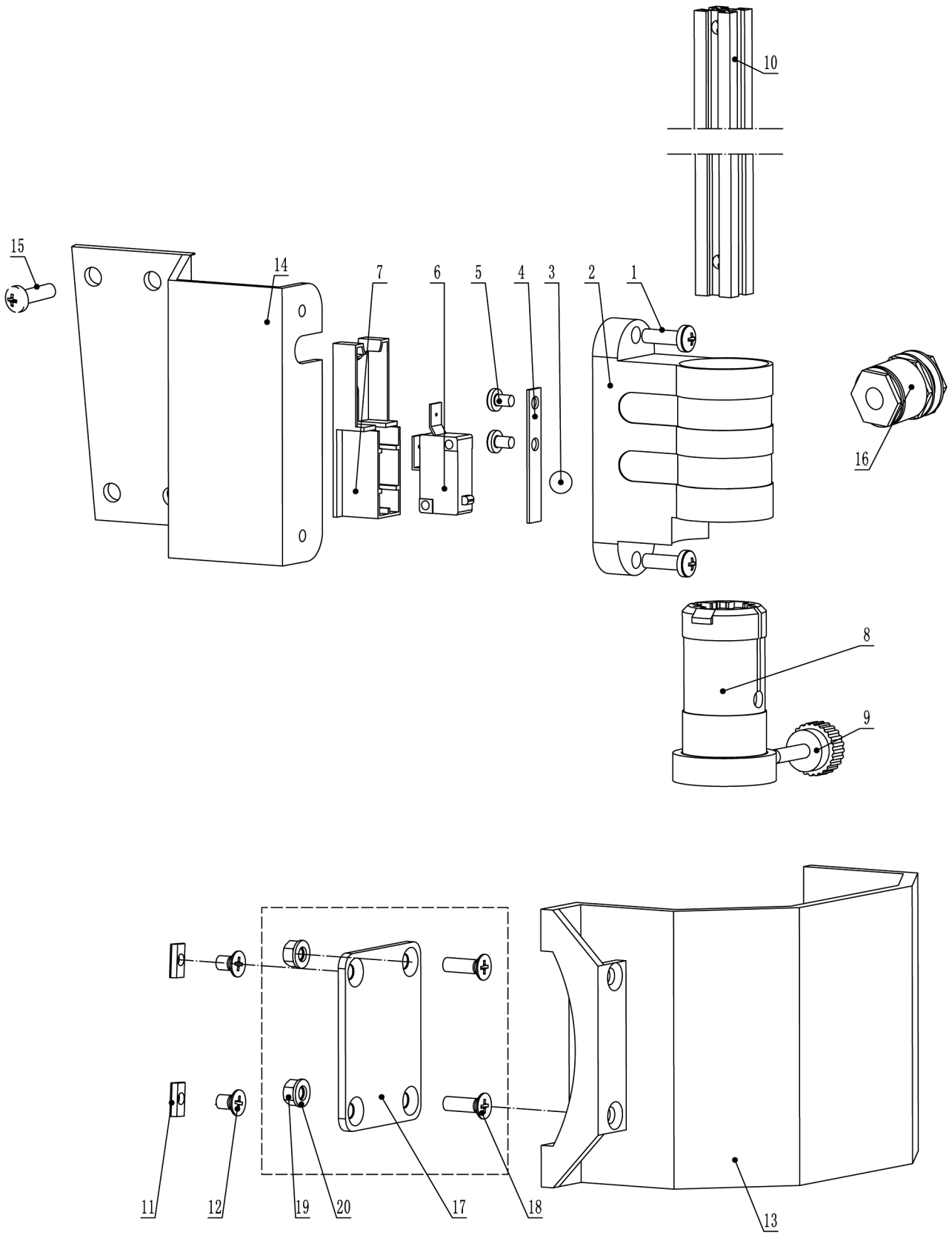
EXPLODED DIAGRAM/PARTS LIST

92	CLAMP	1
93	MAIN SHAFT	1
94	LIVE AXLE	1
95	CHUCK	1
97	NUT	1
98	CIRCLIP	1
99	BEARING	1
100	SPACER SLEEVE	1
101	BEARING	1
102	SPINDLE HOUSING	1
103	DRIVEN PULLEY	1
104	NUT	1
105	NUT	1
107	PIN	1
108	WASHER	2
109	ANTI-VIBRATION PAD	4
110	BOLT	1
111	WASHER	1
112	NUT M6	1
113	KEY	1
114	CONNECTING SHAFT	1
115	CHECK RING	2
116	COVER	1

117	BOLT	4
118	WASHER	1
119	SCREW	1
120	NUT	1
121	WRENCH	1
122	THRUST BEARING	1
123	BOLT M6X12	1
124	WASHER	1
125	MICRO SWITCH	1
126	NUT M6	1
141	DEPTH STOP COLLAR	1
142	SPRING	1
143	ADJUSTING ROLLER	1
171	SWITCH	1
181	BOLT	1
182	WASHER	1
183	SHAFT SLEEVE	1
202	LED LIGHT	1
203	BOLT	2
204	WASHER	2
205	NUT	2
206	BOLT	2

NO	DESCRIPTION	QTY
2-1	BOLT M5X16	2
2-2	BASE	1
2-3	STEEL BALL	1
2-4	SHRAPNEL	1
2-5	BOLT M4X6	2
2-6	MICRO SWITCH	1
2-7	COVER PLATE	1
2-8	GUIDE SLEEVE	1
2-9	LOCKING HANDLE	1
2-10	GUIDE PILLAR	1

2-11	SLIDING BLOCK	2
2-12	BOLT	2
2-13	GUARD	1
2-14	DEAD PLATE	1
2-15	BOLT	4
2-16	CABLE GLAND	1
2-17	MOUNTING PLATE	1
2-18	BOLT	2
2-19	NUT M5	2
2-20	WASHER 5	2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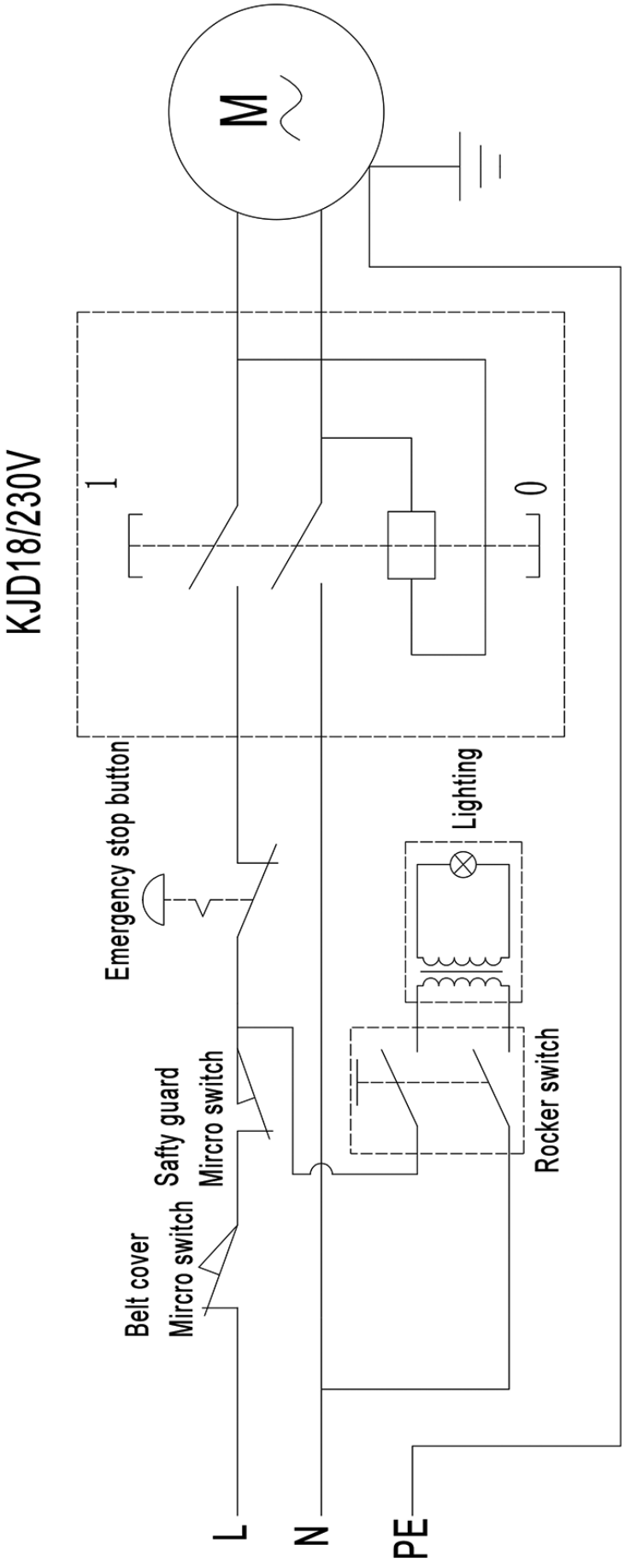
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KJD18/230V
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Emergency stop button
Lighting
Safty guard
Mircro switch
Belt cover
Mircro switch
Rocker switch
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NOTES

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