



OPERATING INSTRUCTION FOR BAND SAW

PMS 530/700 HAD



Before transporting and using the machine, please read the instructions thoroughly!



Serial No.:

Specifications




Cutting capacity						Floor space	
90°	530 mm	530 x 530 mm	335 x 700 mm	Blade size	41 x 1.3 x 6060 mm	L xW x H	
45°	490 mm	435 x 435 mm	300 x 500 mm	Blade speed	20 – 85 m/min	Net Weight	1350 kg
60° (L,R)	335 mm	320 x 320 mm	400 x 305 mm	Motor	5,5 kW	Gross weight	1530 kg
45° (L)	480 mm	435 x 435 mm	300 x 480 mm				

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1 ACCIDENT PREVENTION AND SAFETY REGULATION

This machine has been designed to comply with national and community accident- prevention regulations. Improper use and/or tampering with the safety devices will relieve the manufacturer of all responsibility.

1.1 Advice for the operator

- Check, the line voltage is the same as the voltage required by the machine's motor.
- Check the efficiency of your electric supply and grounding system; connect the power cable of the machine to the socket and the ground lead (yellow- green in color) to the grounding system.
- When the machine is in suspended mode (or stopped) the blade must not move.
- Only the blade section used for cutting must be kept unprotected. To remove guards to expose more of the cutting blade adjust the blade guides.
- It is forbidden to use the machine without its shields
- Always disconnect the machine from the power socket before blade change or carrying out any maintenance job, even in the case of abnormal machine operation.
- Always wear suitable eye protection.
- Never put your hands or arms into the cutting area while the machine is operating.
- Do not shift the machine while it is cutting.
- Do not wear loose clothing like: shirts with sleeves that are too long, gloves that are too big, bracelets, chains or any other object that could get caught in the machine during operation. Tie back long hair.
- Keep the area free of miscellaneous object; i.e. equipment, tools, etc...
- Perform only one operation at a time. Never have several objects in your hands at the same time. Keep your hands as clean as possible.
- All internal operations, maintenance or repairs, must be performed in a well-lit area or where there is sufficient light from extra sources to avoid the risk of accidents.

1.2 The electrical equipment according to European Standard" CENELEC EN 60204-1"

- The electrical equipment ensures protection against electric shock as a result of direct or indirect contact. The active parts of this equipment are housed in a box to which access is limited by screws that can only be removed with a special tool; the parts are fed with alternating current as low voltage (24V). The equipment is protected against splashes of water and dust.
- Protection of the system against short circuits is ensured by means of rapid fuses and grounding; in the event of a motor overload, protection is provided by a thermal probe.

- In the event of a power cut, the specific start-up button must be reset.
- The machine has been tested in conformity with point 20 of EN 60204

1.3 Warning labels



Replace warning labels if they become obscured or removed.

- Keep hands and other body parts away from a running blade.
- Do not open the blade cover while machine is running.
- Do not store combustible materials near or around machine.
- Always wear approved safety glasses/face shields while using this machine.
- Keep machine guards in place at all times.
- Do not wear gloves.
- Remove loose clothing and confine long hair.
- Keep the work area clean and free miscellaneous objects.

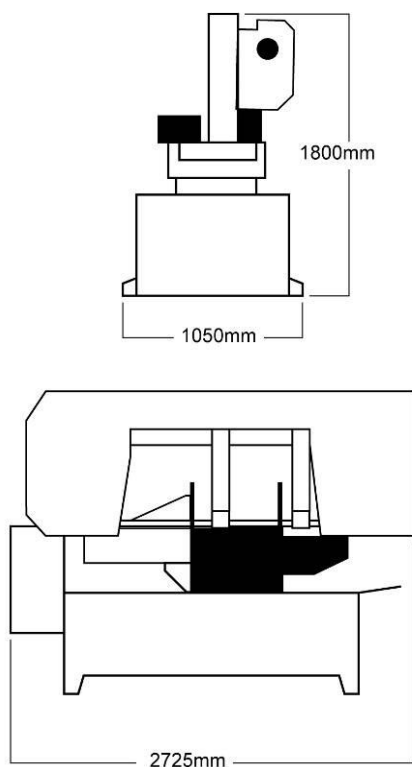
1.4 Emergencies according to European Standard "CENELEC EN 60204-1"

- In the event of incorrect operation or a danger condition, the machine may be stopped immediately by pressing the red mushroom shaped button.

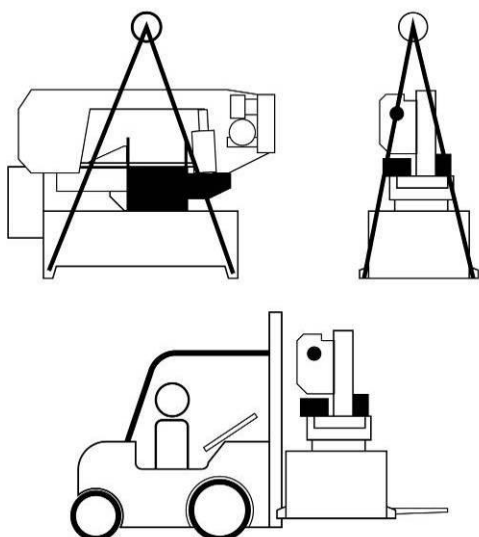
NOTE: Resetting of machine operation after each emergency stop requires resetting the emergency stop button.

2 MACHINE TRANSPORTATION AND INSTALLATION

2.1 Machine dimensions



2.2 Transporting the machine



Unpack your machine carefully, and use a crane or forklift to set it in position. If a crane is used to lift the machine, attach the lifting cable carefully to the machine. Sufficient space should be left around the machine to allow safe handling of materials, inspection, and maintenance operations. Take precautions to choose a location that will keep the machine free of vibration and dust caused by other machinery.

2.3 Minimum requirements for housing the machine

- Main voltage and frequency must comply with the machine's motor requirements.
- Environment temperature should fall within (-10°C to + 50 °C).
- Relative humidity cannot be over 90%.

2.4 Installing the rear coolant return tray

The rear coolant-return tray must be installed after the machine is set in place. Install the coolant return trays first.

Installing three channeled L-bracket

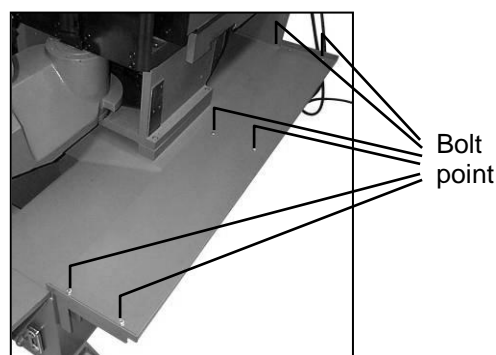
Install three channeled L-bracket to the back of the machine stand. Attaching the brackets requires 6 hex head bolt, 6 spring washers, 6 washers, and 6 nuts.



- Place a spring washer and washer on each hex head bolt.
- Face the long side of the bracket up.
- Align the holes of short side of the bracket to the machine panel's holes.
- Place the 2 hex head bolts and their washers through each bracket and machine panel.
- Use a nut on the inside of the machine stand to secure each hex head bolt.

Securing the rear tray

Attaching the trays requires 6 hex head bolt, 6 spring washers, 6 washers, and 6 nuts.

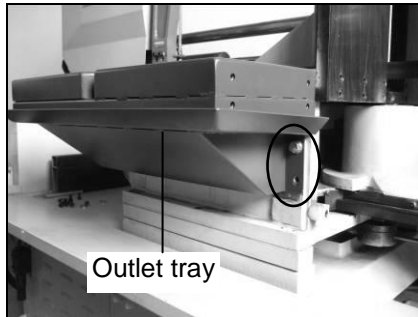


- Arrange the tray rims to facing up and away from the machine.
- Place the rear return tray onto brackets at the back of the machine.
- Align the holes of the rear tray and the six-channelled L-brackets.
- Place 6 hex head bolts through the holes of the trays and brackets.
- Secure each hex head bolts with a washer, spring washer, and hex nut.

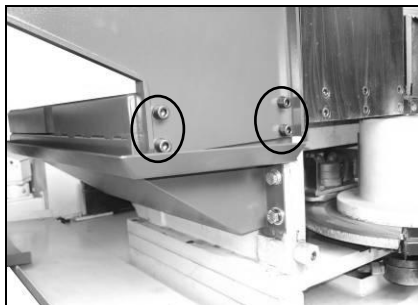
2.5 Installing the outlet tray, length stop device and mobile support cover.

Install the outlet tray and stop bar on to the machine after setting up the machine already as below steps:

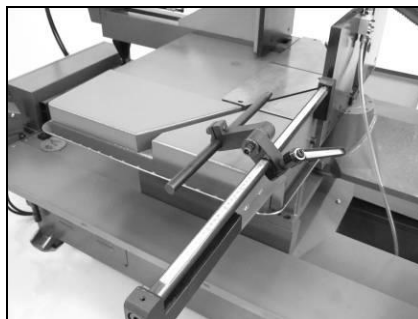
1. Assemble the new outlet tray on to the machine by screw in the four screws on the both side as picture. Tighten the four screws after make sure the surface level on the top of outlet tray as same as the vise table.



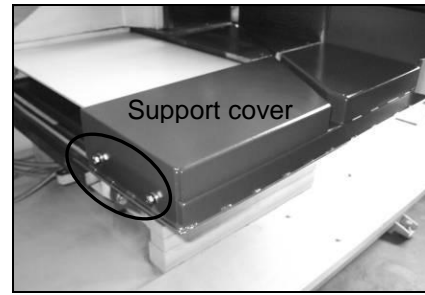
2. Install stop bar assembly on to the outlet tray at the right side by tighten four screws.



3. Loosen the handle on the length scale or the knob on the stop bar that can set the cutting length easily.



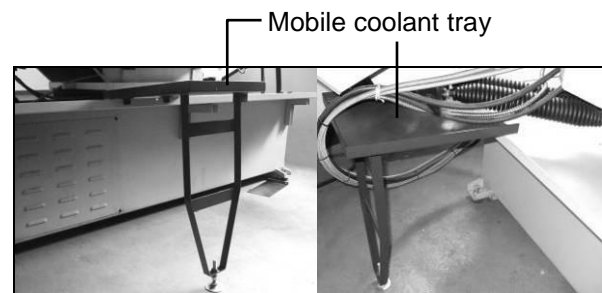
4. If miter cutting on the front way, the support cover on the left side can be removed by loosen three screws to prevent it being cutting.



Caution

Remove the support cover when in this way miter cutting.

5. They are two mobile coolant trays can be moved and used in miter cutting on front and rear side to prevent coolant spray on to the floor.



2.6 Securing to foundation

Position the machine on a flat and level foundation of reinforced concrete. Level machine and anchor it to the foundation with anchor bolts. Maintain a minimum distance of 800mm from the rear of the machine to the wall. Position the anchors using screws and expansion plugs or tie rods sunk in cement.

2.7 Leveling the machine

The operating accuracy of all precision machinery depends on the accuracy of the installation of the machine. Manufacturing tolerance of the machine can only be guaranteed if the machine is firmly and properly installed. Once the machine is lowered on the prepared foundation, machinist levels should be used alternately on the vice slide plates and work feed table, adjust the left to right and front to back level of the machine with leveling bolts.

- When leveling left to right level, adjust left side to be approximately 3mm higher than the level of the right side. This will provide proper return of the cutting fluid. After proper leveling of the machine, use anchor bolts to secure to the foundation. Caution: All leveling bolts should support the weight the machine evenly

2.8 Deactivation of machine

If the machine is to be out of use for a long period, it is advisable to proceed as follows:

- 1) Disconnect from the power supply
- 2) Loosen the tension on the blade

- 3) Release the bow return spring
- 4) Empty the coolant tank
- 5) Carefully clean and grease the machine
- 6) If necessary, cover the machine.

Dismantling (due to deterioration and/or obsolescence)

As a General Rule,

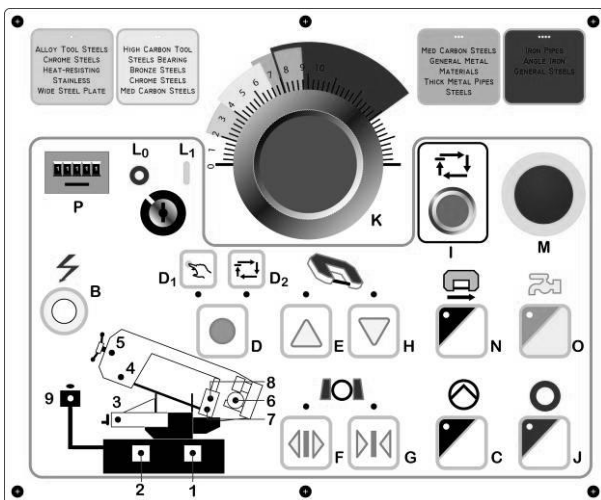
If the machine is to be permanently demolished and/or scrapped, divide the material to be disposed of according to type and composition, as follows:

- 1) Cast iron or ferrous materials, composed of metal alone, are secondary raw materials, so they may be taken to an iron foundry for re-smelting after having removed the contents (classified in point 3).
- 2) Electrical components, including the cable and electronic material (magnetic cards, etc.), fall within the category of material classified as being assimilated to urban waste according to the laws of your local, state, or federal government, so they may be set aside for collection by the public waste disposal service;
- 3) Old mineral and synthetic and/or mixed oils, emulsified oils and greases are considered hazardous or special refuse, so they must be collected, transported and disposed of at a special waste disposal service.

NOTE: The standards and legislation concerning refuse is in a constant state of evolution, therefore is subject to changes. The user must keep informed of the regulations at the time of disposal as these may differ from those described above.

3 DESCRIPTION OF MACHINE PARTS

3.1 Control panel



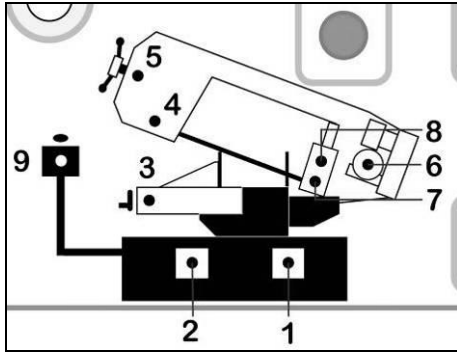
- A. Main connect switch – main power located on the electric box cover.
- B. Main power indicator light – indicates that main power is active

- C. Hydraulic flow control start switch – activates hydraulic power
- D. Operation mode switch – selects either automatic or manual operation mode.
- D1. Manual operation mode – press switch D until the manual mode's indicator light shows up.
- D2. Automatic operation mode – press switch D until the automatic mode's indicator light shows up.
- E. Bow up switch – press to raise the saw bow
- F. Vise open switch – press to open the vise
- G. Vise close switch – press to close the vise
- H. Bow down switch – press to lower the saw bow
- I. Cycle start switch – press to begin operation
- J. Stop switch – press to stop operation cycle and return to start position
- K. Cutting feed rate – adjust the rate of cutting of the saw bow.
- L. Key lock power switch – to start or stop power.
- L0. Power off switch – key switch to turn power off
- L1. Power on switch – key switch to turn power on
- M. Emergency Stop Button – Press to stop all machine functions
- N. Blade tracking switch – press to activate blade tension and set the blade tracking.
- O. Coolant start switch – press to activate or stop coolant flow
- P. Counter – counts the pieces cut, press the button to reset units to zero.



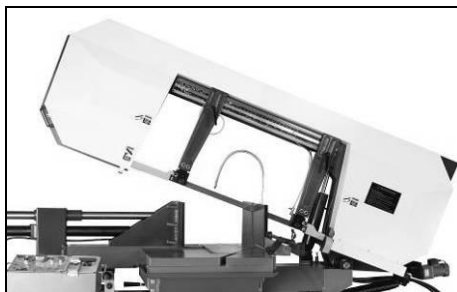
- Q. Stroke height switch – limits the stroke height to eliminate the wasted motion and time. Maximum height limit is 530mm.
- R. Blade speed adjusting knob – controls blade speed for cutting different material.
- S. Blade speed display—Shows blade running speed.

3.2 Indicator lights



1. Coolant pump warning light
2. Hydraulic pump warning light
3. Vise pressure warning light
4. Open blade cover warning light
5. Broken blade warning light
6. Main motor warning light
7. Lower stroke limit indicator light
8. Upper stroke limit indicator light
9. Emergency stop indicator light

3.3 The saw bow



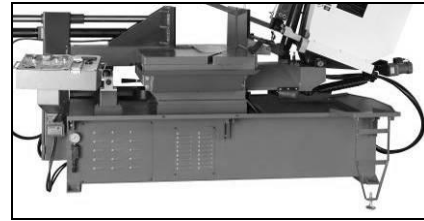
Machine parts consisting of drive members (gear motor, variable speed motor, and flywheels), tightening and guide (blade tightening slide, blade guide blocks) of tool.

3.4 The vise



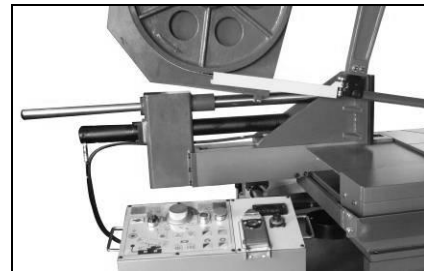
The vise is a system to clamp and holding the work-piece to prevent it from moving during cutting. The vise consists of vise jaws (fixed and mobile) with replaceable plate, vise table, mobile vise table, table slides, and hydraulic vise cylinder. A blade slot splits the fixed vise jaw to allow the blade travel through the vise jaw.

3.5 The base



The base is the structure supporting the saw bow (the bow pivot point and respective blocking system), the vises, and containing chip tray and coolant system.

3.6 The mobile vise system



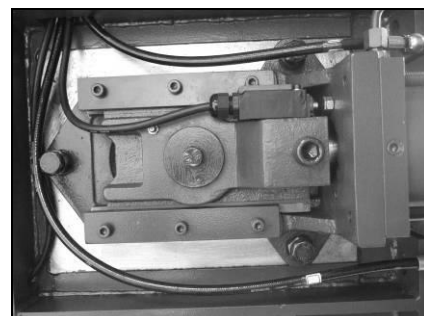
The mobile vise system consists of the mobile vise jaw with replaceable plate, mobile vise table, table slides, hydraulic ram, and hydraulic motor. The hydraulic motor allows the mobile vise system to move cross the vise table preventing the obstruction of the blade path.

3.7 Chip tray



Removable chip tray for capture of chips and debris.

3.8 Blade broken micro switch



This machine is equipped safety limit switch to prevent continuing damage when a blade has been broken. The safety limit switch will automatically cut power when there is a loss of tension. Loss of tension may be cause by extreme stretching or breakage of the blade. Loss of power may also occur if the limit switch does not actuate. An adjustment of the actuator bolt is required so that it touches the limit switch's plunger.

3.9 Chip brush



This model has a powered chip brush driven by an axle transfer from the drive motor. The chip brush is designed to clean the blade thus prolonging the life of the blade.

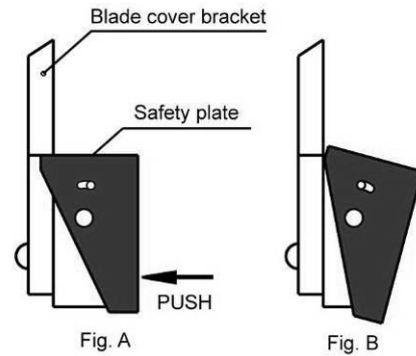
3.10 Blade speed control and indicator



A digital display indicates the blade speed in MPM. This works in conjunction with speed changing knob under the speed indicator to give you precise control of blade speed.

The blade speed has a variable speed that controlled by the motor inverter system. The speed is changed by turning the control knob to adjust the speed must be changed while blade is moving.

3.11 Open Blade Cover Safety Device



When blade cover is open, close the blade cover as instructed below:

1. Use one hand on the cover handle to hold the blade cover.
2. Use the other hand to push in the safety plate (Fig. A), so the bracket will release (Fig. B).
3. Lower the cover down slowly and carefully.

3.12 Attached coolant device

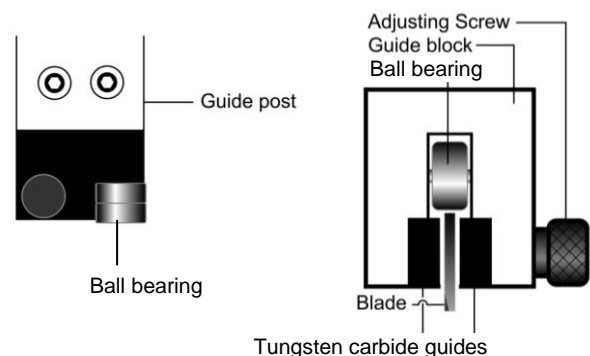


An attached coolant device that is screwed on the front vise jaw for supply enough coolant to the cutting material. This device can be unscrewed, and move to the rear vise jaw for easy both side miter cutting.

4 SET UP AND PRE-OPERATIONS

4.1 Adjusting the tungsten carbide guides

The blade is guided by the upper ball bearings, side ball bearings, and tungsten carbide guides.



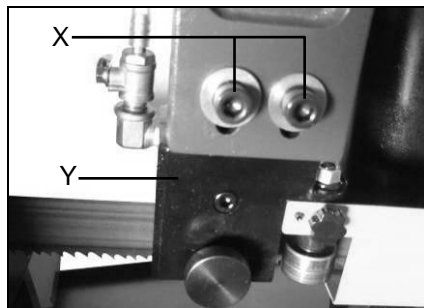
- When ready to cut the work piece, the carbide guide must be adjusted by adjusting the screws

to properly compressed blade. The tungsten carbide blades should touch, but not pinch the blade.

- For moving the blade guide posts or changing blade, the tungsten carbide guides should be released by using the adjusting screw.

In case the blade needs to be replaced, make sure to always install 1.3mm thick blade.

4.2 Thrust Roller Adjustment

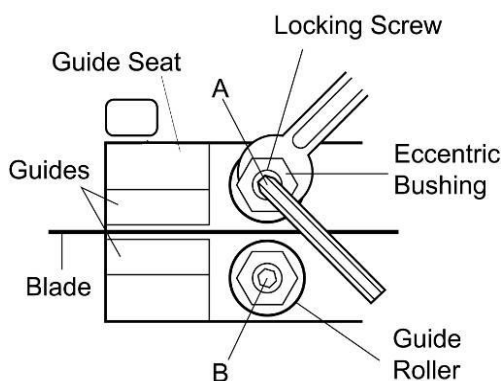


1. Disconnect machine from the power source.
2. Loosen two hex socket cap screws (X)
3. Move guide seat (Y) up or down until a clearance of .003" to .005" between back of blade and thrust roller is obtained.
4. Tighten two hex socket cap screws (X).
5. Repeat for other blade guide assembly.
6. Connect machine to the power source.

4.3 Guide Roller adjustment

Note:

Only bearing (A) is adjustable. Bearing (B) is fixed.

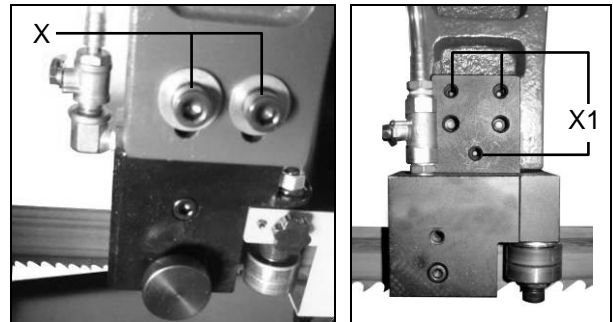


1. **Disconnect machine from the power source.**
2. Loosen blade guides by loosening guide adjustment screw (Z4.2).
3. Loosen locking screws (A) by using a hex wrench.
4. Adjust the eccentric bushings with a combination wrench until the ball bearings are snug to the blade (A)

Note: blade should travel freely up and down between the ball bearings. do not pinch the blade.

5. Tighten locking screws (A).
6. Connect machine to the power source.

4.4 Adjusting the cutting precision

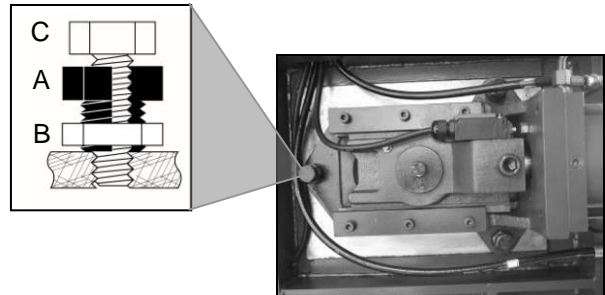


The cutting precision has been set at the factory. This adjustment should only be accomplished by a qualified personnel that are familiar with this type of adjustment.

- Disconnect the machine from power supply.
- Loosen the adjusting bolts (X) slightly, if needed.
- Use the setscrews (X1) to adjust the direction of the guide blocks.
- After adjusting, tighten the adjusting bolts (X).

4.5 Blade tracking adjustment

This adjustment must be accomplished by qualified personnel that are familiar with this type of adjustment and the dangers associated with it.



The blade tracking is factory set and should not require any adjustment. If a tracking problem occurs, adjust the machine as follows:

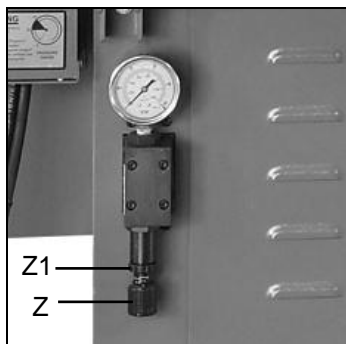
- Raise saw arm to a usable height.
- Disconnect the machine from the power source.
- Locate tracking adjustment bolt on the backside of the saw bow behind the flywheel.
- Loosen hex cap screw C, located on the top of the tracking nut B.
- Tracking adjustment is accomplished by either raising or lowering adjusting screw A.
- Tracking is set properly when the back of the blade lightly touches the wheel flange. Note: over tracking (allowing blade back to rub hard against wheel flange) will damage the blade wheels and blade.
- Secure the locking bolt A. Tighten hex cap screw C and tracking nut B.
- Connect machine to the power source.

4.6 Placing the saw blade onto the drive wheel and driven wheel

- Disconnect from power supply
- Remove the blade guards
- Turn the blade tension handle counter-clockwise, to fully loosen the flywheel.
- Open the blade cover and place the saw blade onto the race of the drive wheel and flywheel.
- *Check the cutting direction of the saw blade.
- Insert the saw blade into the rollers of the left and right blade guide.
- The back edge of the saw blade should make contact with the flange of the drive and flywheel; turn clockwise the blade tension handle to tighten the saw blade, until the blade is properly tensioned.
- Replace the blade guards.
- Use the blade running switch 3.1N to check the proper ride of the blade.

4.7 Hydraulic vise pressure

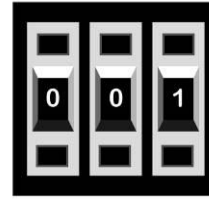
The hydraulic vise pressure can be monitored and adjusted by a pressure gauge on the base of the machine. The normal pressure is set at 35kgs/cm². This is good for most solid firm materials. For softer, hollow, or pipe materials reduce the pressure to over 25kgs/cm². Other materials may require different clamping force. The clamping pressure may be adjusted by a knob at the base of the pressure gauge assembly.



- Start by pressing the vise close switch (3.1G) continuously in manual mode to have the vise clamp onto a workpiece.
- Next, unlock the fluted knob (Z) by releasing fluted lock nut (Z1).
- Turn the fluted knob (Z) counterclockwise to decrease the pressure, clockwise to increase the vise pressure.
- Lock the fluted nut (Z1) after adjustment.

5 OPERATION PREPARATIONS

5.1 Setting the stroke limit

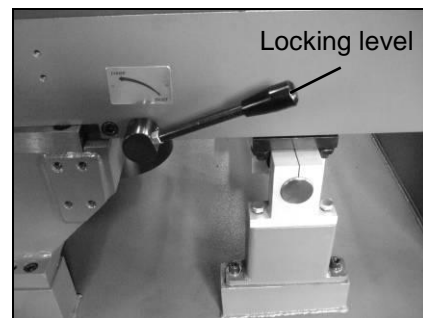


Q

This machine is equipped with a numeral switch Q to set the saw bow an efficient return height. If cutting lots of pieces, set the saw bow's return stroke height switch according to the work-piece's diameter will reduce the overall time of one operation cycle.

5.2 Positioning the vise for angle cutting

The mobile vise system is manually moved, vise close or open by the hydraulically powered. This system is to be used prior to cutting operations. It is generally intended for use with angle cutting operations to prevent the mobile vise jaw from contacting the blade.



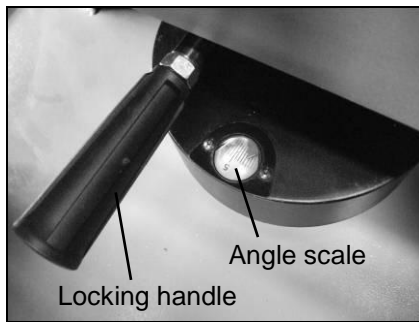
Reposition the mobile vise system

- Apply power to the machine. Checks the main connect switch (3.1A) and the power on switch (3.1L1). The blade should not be moving.
- Activate the hydraulic pump. Use the hydraulic pump switch (3.1C).
- Adjust the blade to clear the height of the vise jaws. Use the saw bow up switch (3.1E).
- For angle cutting, if need to move mobile vise device to the opposite position, release the locking level and push the mobile vise device by hands to other position, and lock the handle.

5.3 Set the cutting angle

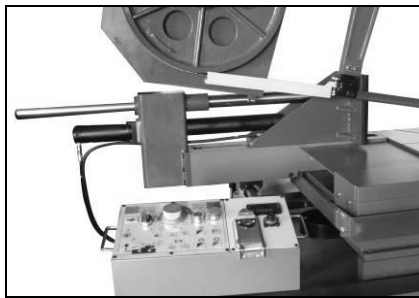
The machine can cut angles up to 60° on both side directions.

- Set the numerical switch Q (5.1) of head stroke at least over 270 and raise up the blade height to clear the vise jaws.



- Release the saw head-locking handle.
- Push saw head following the angle scale to desired angle.
- When the saw bow reaches the desired angle, relock the locking handle to secure the saw head.

5.4 Using the vise



The vise works by using a hydraulic ram to push a mobile vise jaw close to a work-piece, which again pushes the work-piece against fixed and immobile vise jaw. They're by clamping the work piece between two jaws.

The vise operates automatically during cutting operation. The vise can be controlled using buttons on the control panel. Press the vise open switch (3.1F) to open the vise. Press the vise close switch (3.1G) to close the vise. Power must be active. Hydraulic pump must be active.

5.5 Adjusting the blade speed

- *Blade speed must be set while blade is moving.
- Check that the machine is running and blade is moving.
- Turn the speed change knob and check the speed indicator for desired speed. Turn the knob clockwise to raise blade speed, and turn the knob counter clockwise to reduce blade speed. The speeds available are 17-71MPM at 50Hz and 20-85MPM at 60Hz.

5.6 Selecting Automatic and Manual operation

- To select manual mode, press operation mode switch (3.1D).
- Check the indicator light (3.1D1) lightens.
- To select hydraulic operation, press operation mode switch.
- Check the indicator light (3.1D2) lightens.

5.7 Changing the blade



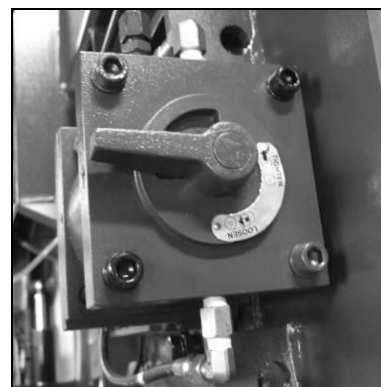
WARNING

Disconnect the machine from the power source before making any adjustments or repairs! Failure to comply may result in serious injury!

- Raise the saw bow approximately 6" in height.
- Disconnect the machine from the power source.
- Remove both blade guides from the blade guide blocks and cover.
- Loosen the cover's lock screws and open the covers.
- Lower the chip brush away from blade by loosening its screws.
- Loosen left blade guide arm's lock handles and slides it to the right side as far as possible.
- Release blade tension by turning the blade tensioning handle counter-clockwise to Loosen until blade is free.
- Remove the old blade from both wheels and out of each blade guide.

⚠ Caution: Even dull blades are sharp to the skin! Use extra caution handling band saw blades!

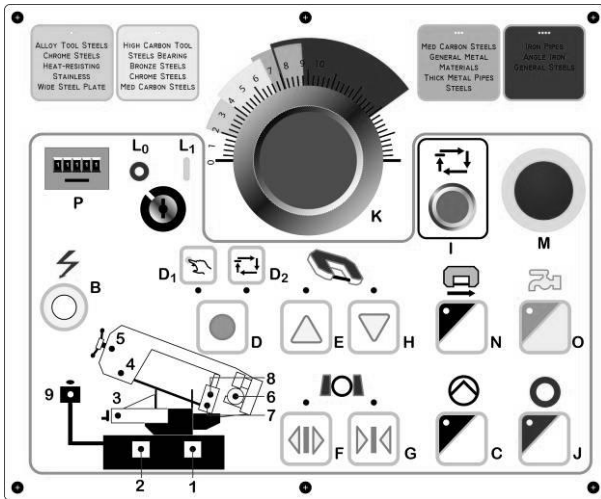
- Position the blade and making sure that the teeth are pointed downward in the cutting direction.
- Position the blade on the wheels. Make sure back of the blade rests lightly against the wheel flange of the both wheels. Twist blade slightly to allow it to slip into guides.
- Tension the blade by turn the hydraulic handle to the tension position. Replace the chip brush device so that it touches the blade and tighten setscrew.



- Close all covers and guards and fasten securely. Connect machine to power and run the blade freely for one minutes.
- Turn the power off and recheck the blade tension and chip brush. If further adjustment is necessary disconnect the saw from the power source, make adjustments, and re-connect the power.

6 OPERATION CYCLE

6.1 Operation cycle



- Turn on the main connect switch A. on the door of electrical box.
- Turn the key to automatic operation mode L1 to unlock the machine. The indicator light B should be lit.
- Start the hydraulic system, use switch C.
- Press the selector D to manual operation mode D1, and its indicator light will be lit.
- Raise the saw bow, Use bow up switch E.
- Open the vise, use vise open switch F.
- Set the cutting angle (5.3), if desired.
- Load the working material.
- Secure the material, use the vise close switch (6.1G).
- Base on the diameter of the material; set the saw bow's height (6.1Q).
- If planning to cut many pieces, set the saw bow stroke height.
- Select the operation cycle mode (6.1D2) to press the selector (6.1D). The indicator light will be lit.
- Restart the hydraulic system. Press the hydraulic start switch (6.1C).
- Start operation by using the start switch (6.1I).
- Set the blade speed 3.1 (R) appropriate for the material.
- The digital display (3.1S) will present pieces cut.
- When the cutting operation is finished the saw bow will automatically rise to the preset height ready for the next operation.

6.2 Stopping or emergency stopping

There are two ways to stop the machine in an event of an emergency or improper operation.

- For most situations, use the stop switch (6.1J). Using the stop switch (6.1J) will not reset the controls and your operation setting. The blade and drive motor will stop. Then the saw bow will rise to the start position. Adjustments can be made.

- Use the cycle start switch to continue the cutting cycle.
- For unsafe and emergency conditions, use the emergency stop button (6.1M). Using emergency stop button (6.1M) will stop the machine in last position. The motor and hydraulic will stop and control setting will be reset.
- To restart, the emergency stop button (6.1M) must be turned to release from the pressed position. Then the operation cycle 6.1 must be restarted.

6.3 Automatic shutoff during machine operation

If there are any improper operation or situation, the machine is designed to automatically shut off during the operation cycle to prevent any further damage from occurring.

- If the hydraulic pump is on and the machine has not been active for 5 minutes, the power will be shut off.
- If the time take to clamp the vise is over 40 sec, the power will shut off. The vise pressure warning light will flash in warning.
- After cutting the saw bow has taken more than 40 sec to rise to the start position, the power will shut off. The upper stroke-limit indicator light will flash in warning.
- After pressing the start button, the vise clamps the work piece, and saw bow begins cutting. If the cutting time is unable to finish within 90 minutes, the lower stroke limit indicator will flash in warning and the power will be shut off.

If any of the above situations occurs, reset the machine by pressing 6.1D. This will change the operation mode – manual or automatic.

7 ROUTINE AND SPECIAL MAINTENANCE

The maintenance jobs are listed below, divided into daily, weekly, monthly and six-month intervals. If the following operations are neglected, the result will be premature wear of the machine and poor performance.

7.1 Daily maintenance

- Give general cleaning to the machine to remove accumulated shavings.
- Clean the lubricating coolant drain hole to avoid excess fluid.
- Top off the level of lubricating coolant.
- Check blade for wear.
- Rise of saw frame to top position and partial slackening of the blade to avoid useless yield stress.
- Check functionality of the shields and emergency stops.

7.2 Weekly maintenance

- Thoroughly clean the machine to remove shavings, especially from the coolant tank.
- Removal of pump from its housing, cleaning of the suction filter and suction zone.
- Clean the filter of the pump suction head and the suction area.
- Use compressed air to clean the blade guides (guide bearings and drain hole of the lubricating cooling).
- Clean flywheel housings and blade sliding surfaces on flywheels.

7.3 Monthly maintenance

- Check the tightening of the drive wheel screws.
- Check that the blade guide bearings on the heads are perfect running condition.
- Check the tightening of the screws of the motor, pump, and accident protection guarding.

7.4 Six-monthly maintenance

- Test the continuity of the equipment potential protection circuit.

7.5 Oils for lubricating coolant

Considering the vast range of products on the market, the user can choose the one most suited to their own requirements, using as reference the type SHELL LUTEM OIL ECO. THE MINIMUM PERCENTAGE OF OIL DILUTED IN WATER IS 8 - 10 %.

7.6 Oil disposal

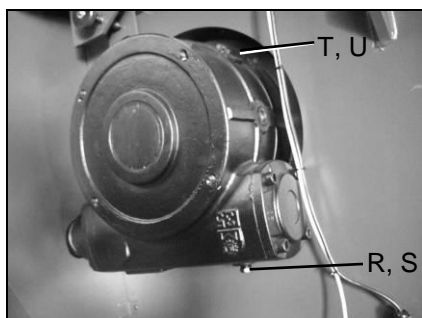
The disposal of these products is controlled by strict regulations. Please see the Chapter on "Machine dimensions Transport - Installation" in the section on Dismantling.

7.7 Special maintenance

Special maintenance must be conducted by skilled personnel. We advise contacting your nearest dealer and/or importer. Other protective and safety equipment, devices (of the reducer), the motor, the motor pump, and other electrical components also require special maintenance.

7.8 Changing gear oil




The gear box requires periodic changing of oil. The oil must be changed by the first 6 months of a new machine and every year thereafter.



- To change the gear box oil.
- Lower the saw bow to horizontal position.
- Disconnect the machine from the power source.
- Release the drain hold (R) to draw off gear oil by loosening the hex head screw (S).
- Open fill hole (T) by releasing hex head screw (U)
- Replace the screw (S) after oil completely flows off.
- Filling in gear oil from T hole, until oil be sight from the visual glass.
- Replace hole using the fill hole (T).
- Replace hex head screw (U)

8 TECHNICAL CHARACTERISTICS

8.1 Table of cutting capacity and technical details

Cutting Capacity			
90°	530mm	530x530mm	700x335mm
45°	490mm	435x435mm	500x300mm
60°	335mm	320x320mm	305x400mm
45°(L)	480mm	435x435mm	480x300mm
60°(L)	335mm	320x320mm	305x400mm

Blade motor	7.5 HP
Blade size	41 x 1.3 x 6060 mm
Blade speed	20 ~ 85 mpm
Hydraulic Tank	15 L
Coolant Tank	56 L
Machine size (LxWxH)	2925 x 1040 x 1800 mm
Table height	923 mm
Machine weight	1350kgs

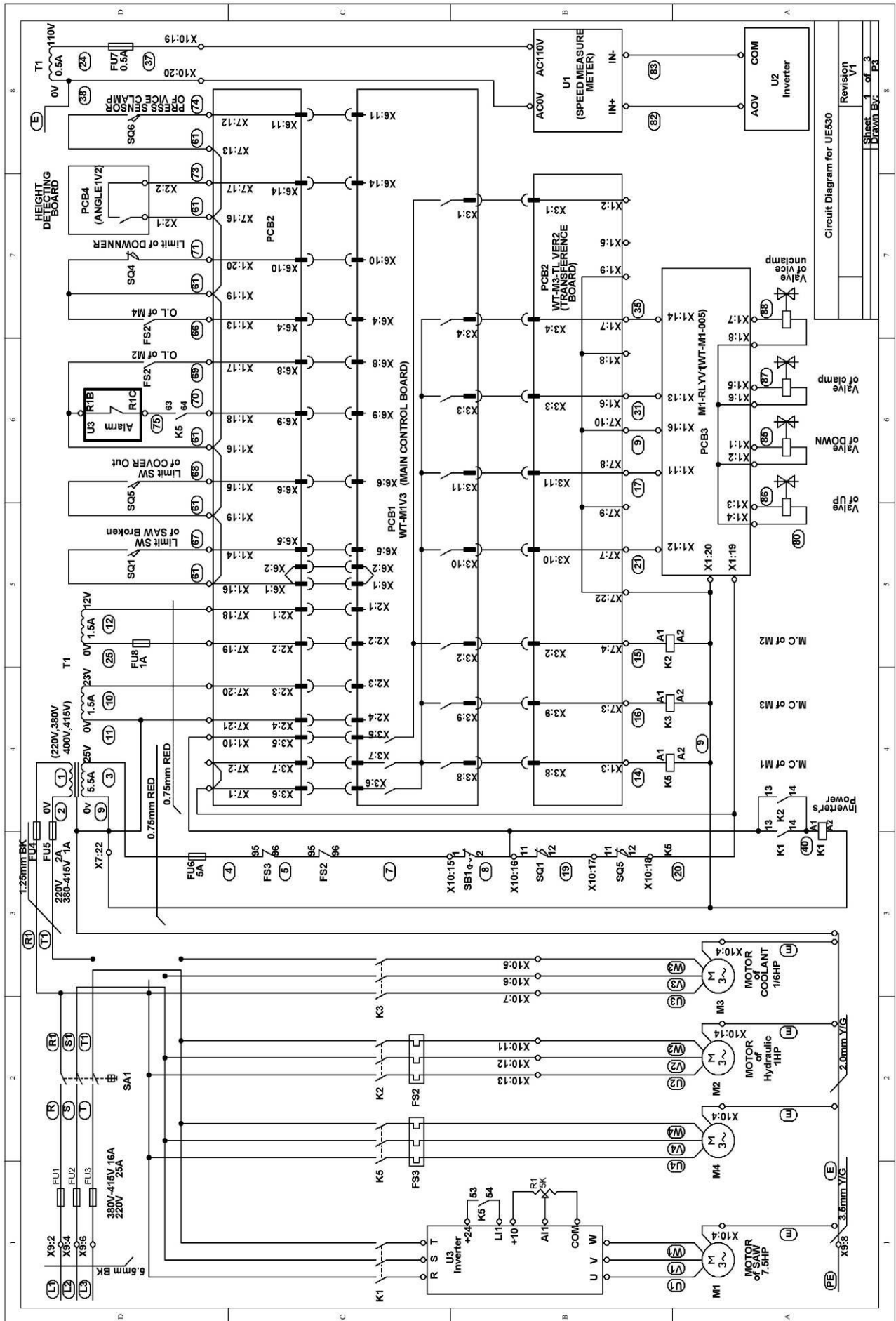
TYPES OF STEEL						CHARACTERISTICS		
USE	I UNI	D DIN	F AF NOR	GB SB	USA AISI-SAE	Hardness BRINELL HB	Hardness ROCKWELL HRB	R=N/mm²
Construction steels	Fe360	St37	E24	----	----	116	67	360÷480
	Fe430	St44	E28	43	----	148	80	430÷560
	Fe510	St52	E36	50	----	180	88	510÷660
Carbon steels	C20	CK20	XC20	060 A 20	1020	198	93	540÷690
	C40	CK40	XC42H1	060 A 40	1040	198	93	700÷840
	C50	CK50	----	----	1050	202	94	760÷900
	C60	CK60	XC55	060 A 62	1060	202	94	830÷980
Spring steels	50CrV4	50CrV4	50CV4	735 A 50	6150	207	95	1140÷1330
	60SiCr8	60SiCr7	----	----	9262	224	98	1220÷1400
Alloyed steels for hardening and tempering and for nitriding	35CrMo4	34CrMo4	35CD4	708 A 37	4135	220	98	780÷930
	39NiCrMo4	36CrNiMo4	39NCD4	----	9840	228	99	880÷1080
	41CrAlMo7	41CrAlMo7	40CADG12	905 M 39	----	232	100	930÷1130
Alloyed casehardening steels	18NiCrMo7	----	20NCD7	En 325	4320	232	100	760÷1030
	20NiCrMo2	21NiCrMo2	20NCD2	805 H 20	4315	224	98	690÷980
Alloyed for bearings	100Cr6	100Cr6	100C6	534 A 99	52100	207	95	690÷980
Tool steel	52NiCrMoKU	56NiCrMoV7C100K	----	----	----	244	102	800÷1030
	C100KU	C100W1	----	BS 1	S-1	212	96	710÷980
	X210Cr13KU	X210Cr12	Z200C12	BD2-BD3	D6-D3	252	103	820÷1060
	58SiMo8KU	----	Y60SC7	----	S5	244	102	800÷1030
Stainless steels	X12Cr13	4001	----	----	410	202	94	670÷885
	X5CrNi1810	4301	Z5CN18.09	304 C 12	304	202	94	590÷685
	X8CrNi1910	----	----	----	----	202	94	540÷685
	X8CrNiMo1713	4401	Z6CDN17.12	316 S 16	316	202	94	490÷685
Copper alloys Special brass Bronze	Aluminium copper alloy G-CuAl11Fe4Ni4 UNI 5275					220	98	620÷685
	Special manganese/silicon brass G-CuZn36Si1Pb1 UNI5038					140	77	375÷440
	Manganese bronze SAE43 - SAE430					120	69	320÷410
	Phosphor bronze G-CuSn12 UNI 7013/2a					100	56,5	265÷314
Cast iron	Gray pig iron G25					212	96	245
	Spheroidal graphite cast iron GS600					232	100	600
	Malleable cast iron W40-05					222	98	420

8.2 NOISE TESTS

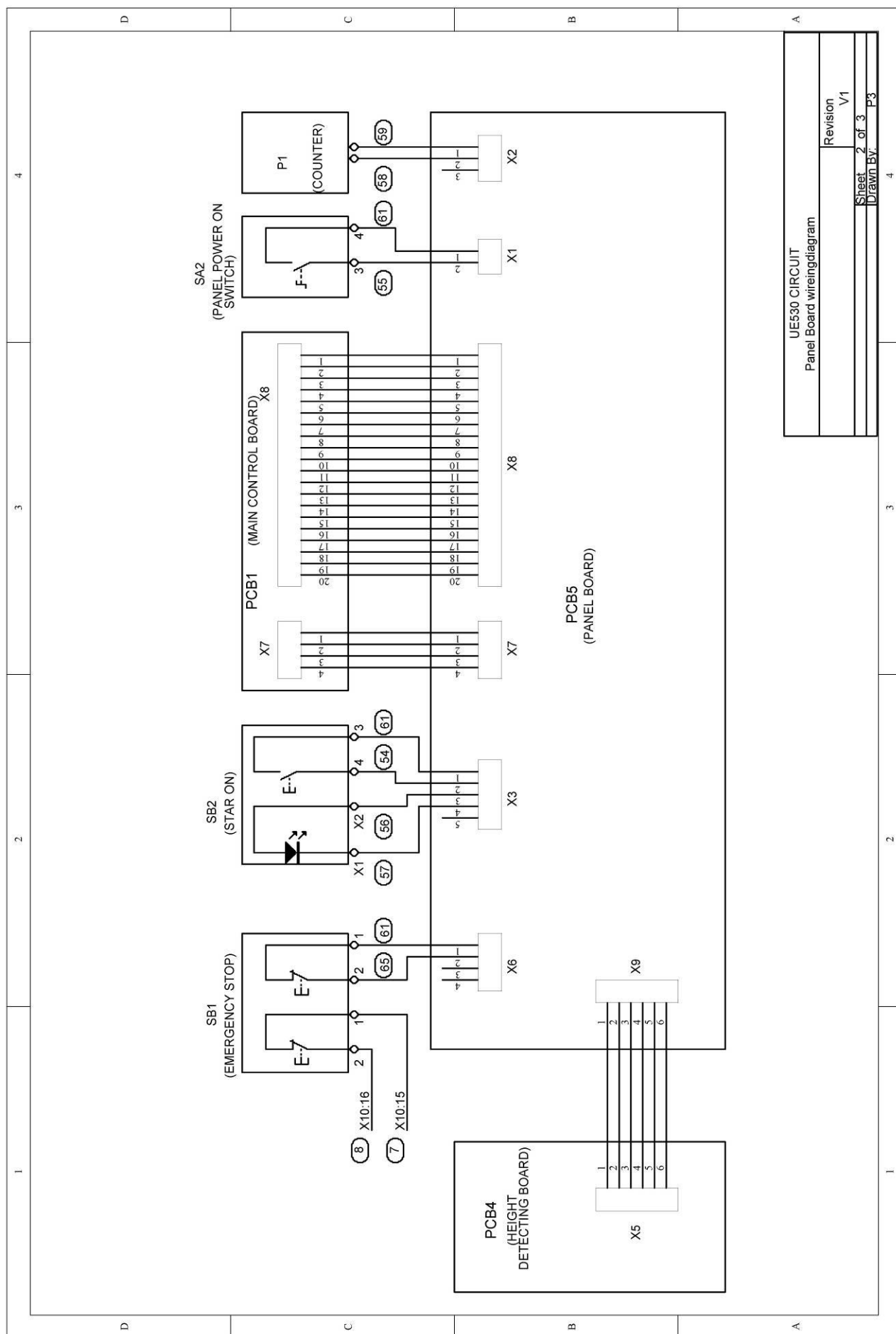
The test was held under environmental noise levels of 65db. Noise measurements with the machine operating unload was 71db. Noise level during the cutting of mild carbon steel was 73db.

NOTE: with the machine operating, the noise level will vary according to the different materials being processed. The user must therefore assess the intensity and if necessary provide the operators with the necessary personal protection, as required by Law 277/1991.

CONTROL CIRCUIT DIAGRAM

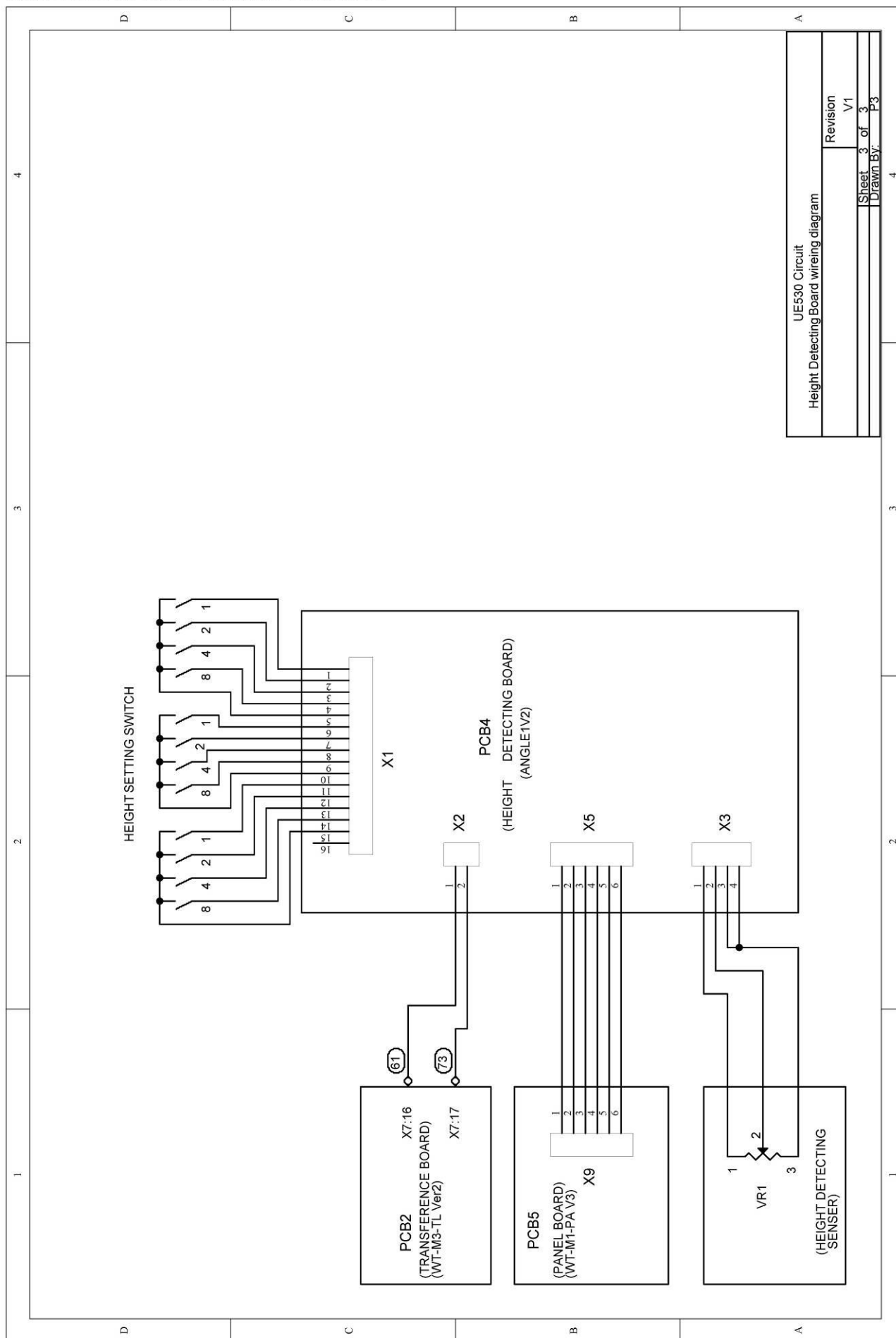


PANEL BOARD WIRING DIAGRAM



UE530 CIRCUIT	
Panel Board wiring diagram	
Revision	V1
Sheet	2 of 3
Drawn By	P3

SAW BOW STROKE WIRING DIAGRAM

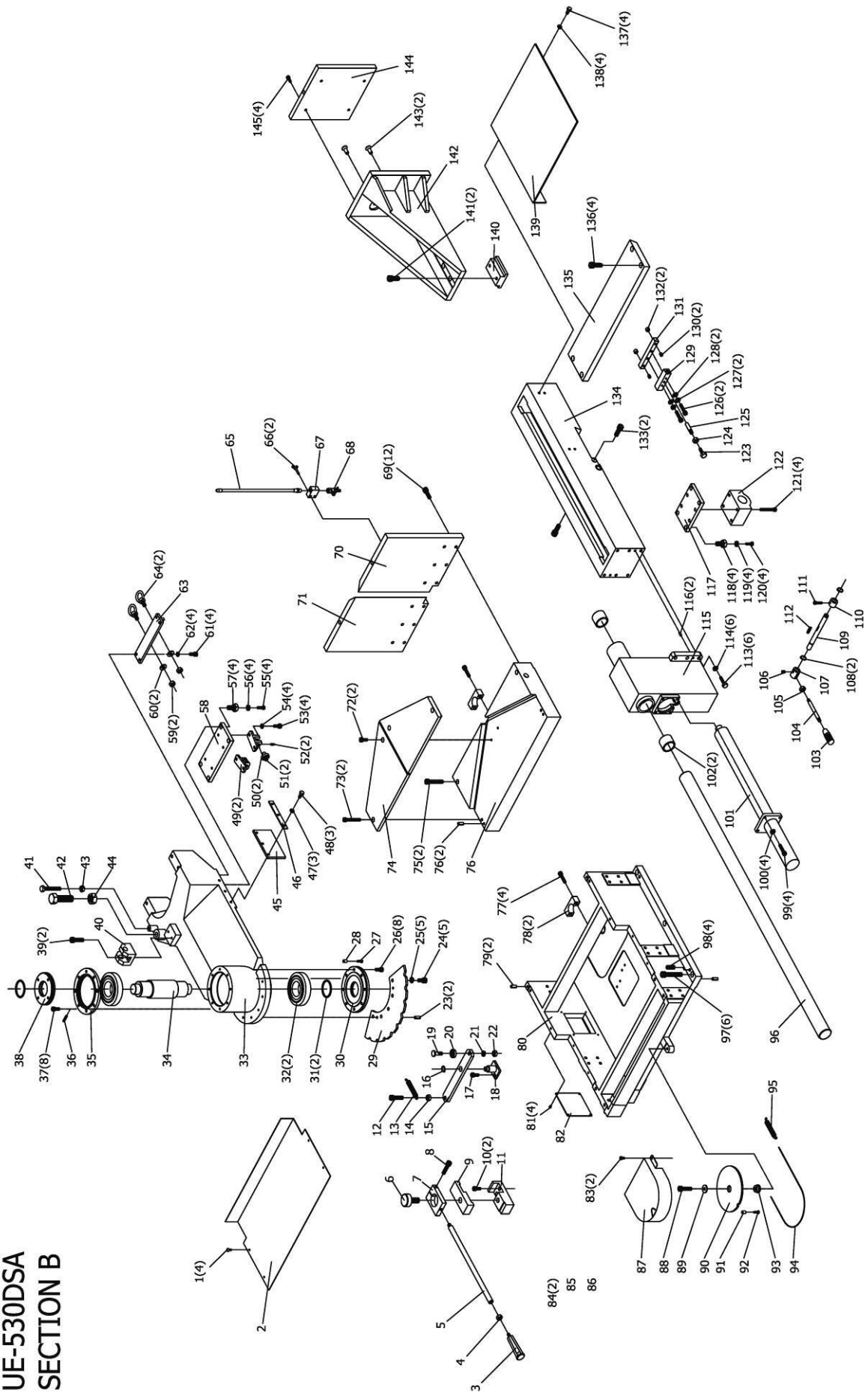


UE530 Circuit			
Height Detecting Board wiring diagram		Revision	V1
Sheet	3 of 3	Drawn By:	P3

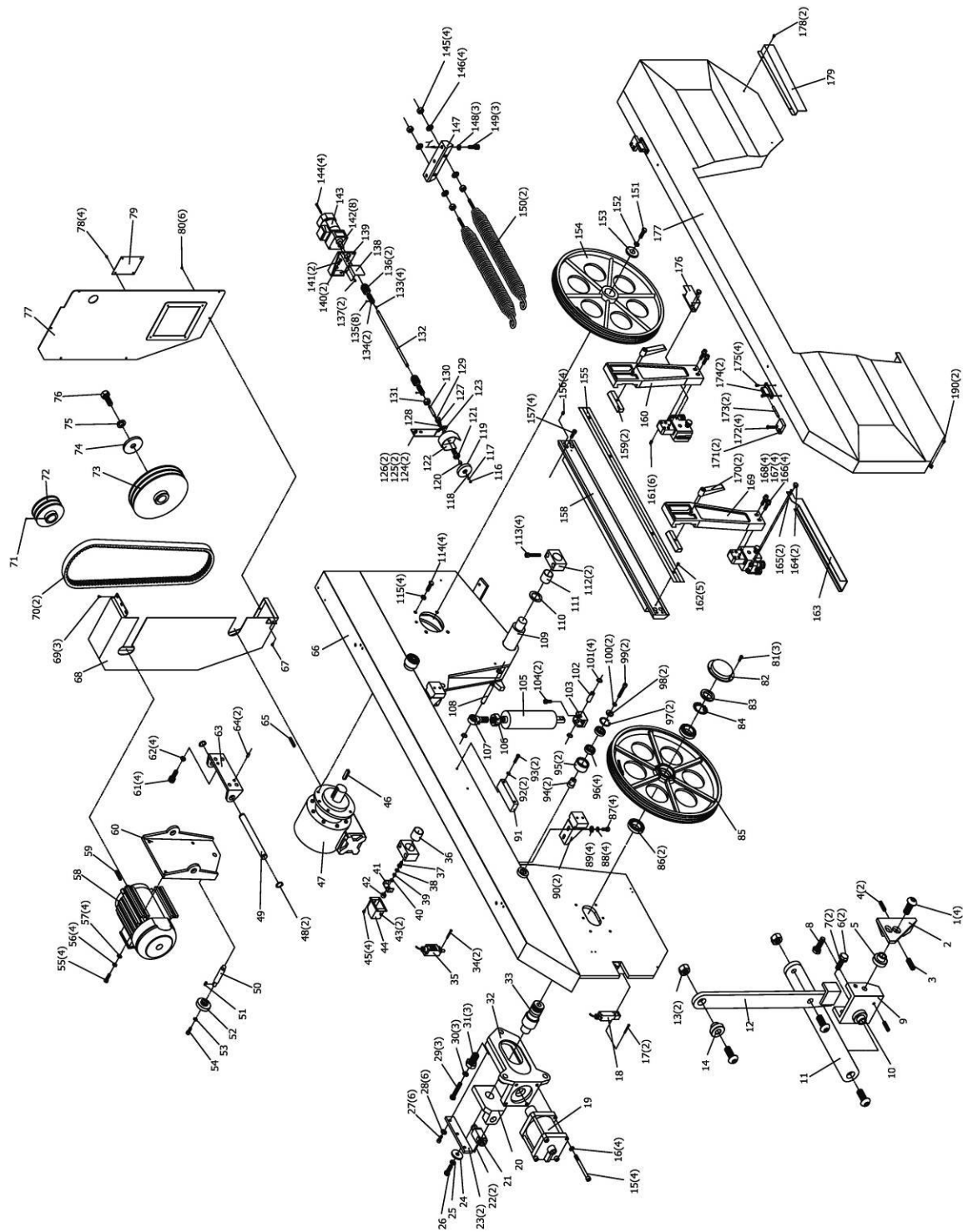
SECTION A

Exploded view diagram of a mechanical assembly, showing various components numbered 1 through 125. The diagram illustrates the assembly structure, including a main frame (76), a control panel (98), a display unit (93), and a motorized assembly (40). The components are arranged in a perspective view, showing their relative positions and assembly relationships.

UE-530DSA SECTION B



UE-530DSA SECTION C



UE-530DSA SECTION D

