USER'S MANUAL

AUTOMATIC UPCUT MITER SAW
US1-700 series



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TECHNICAL FEATURES

					H ↑ ↓ ↓ ↓ L W cm	kg	kg
4 kW	3000 RPM	D = 700 mm d = 38 mm	6/8 Bar	60 Lt/min	W = 120 L = 145 H = 181	500	550

DIMENSIONS

Dimensions are in millimeters. 1 inch = 25.4 millimeters.

CUTTING DIAGRAM 700 (Ø700 MM) mm. 270 250 -200 -150 -100 -50 mm. 400 430

200

50

100

150

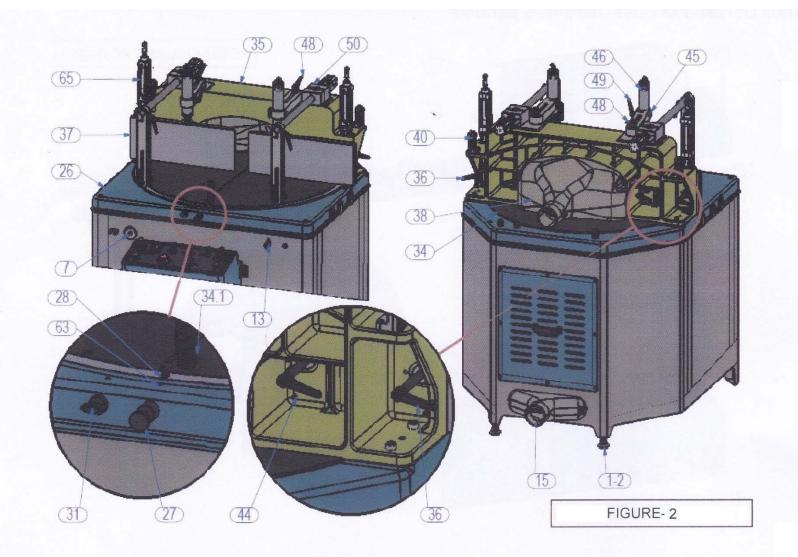
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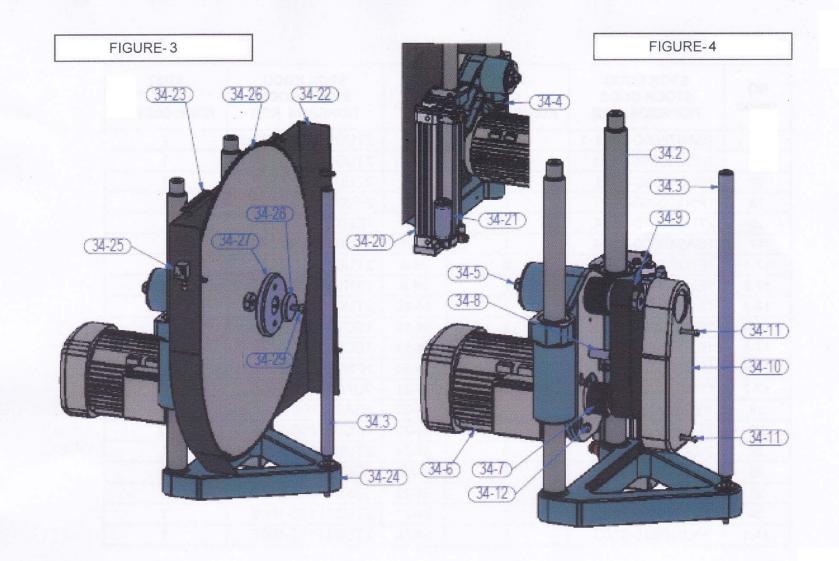
250

300

350

PART LIST FIGURE 1 (51) (57). (59) -(18)(17)-(17-6) (17-7) (174-2) (174-2) (17.5) (17.1)





NO	STOCK CODE	QTY	NO	STOCK CODE	QTY
1	1SA970000-0001-1	1	34-2	2TU015010-0223	2
7	1HD050000-0001	1	34-3	2TU011110-1608	1
12	1PL010000-0019	1	34-4	2TU012510-0588	1
13	1PN130000-0007	1	34-5	2TU011110-1603	1
15	2TU012510-0584	1	34-6	1EL070001-0005	1
17	1SA040000-0024	1	34-7	2TU012110-1079	1
17-1	1EL090000-0003	2	34-8	2TU011110-1606	1
17-2	1EL090000-0001	1	34-9	1SR070000-0032	1
17-3	1EL010000-0033	1	34-10	2TU012510-0590	1
17-4	1PN010000-0055	3	34-11	1SC021000-0020	2
17-5	1EL090000-0017	1	34-12	1SC011000-0019	4
17-6	1PN020000-0102	1	34-20	1PN020000-0286	1
17-7	1PN080000-0006	1	34-21	3UA050030-0025	1
18	1SC140000-0002	3	34-22	1SA970000-0001-2	1
26	2TU012550-0585	1	34-23	1SC021000-0064	12
27	3UA030030-0005	1	34-24	2TU012510-0589	1
28	2TU011441-0017	1	34-25	1PN010000-0012	1
31	2TU011110-0144	1	34-26	1SK010000-0089	1
34	2TU011610-0027	1	34-27	2TU011110-1605	1
31-1	1PL010000-0103	1	34-28	2TU011110-1607	1

34-29	1SC021000-0004	1		
35	2TU012510-0550-0	1		
36	3UA040030-0011	4		
37	2TU012410-0447	2		
38	2TU012510-0587	1		
40	2TU012710-0009	2		
44	1SC151000-0007	8		2
45	2TU012210-1751	2		
46	2TU011510-0095	1		
48	2TU012610-0036	2		
49	2TU012610-0037	2		
50	3UA970030-0003	2		
57	1SA970000-0001-6	1		,
58	1SA970000-0001-7	1		
59	4UN300030-0003	1		
63	1SC151000-0003	2		
65	1PN020000-0305	2		

	SPARE PART LIST					
PART NO	FIGURE	CODE	PART NAME			
*		1EL020000-0005	COVER SWITCH			
		1EL020000-0025	COVER SWITCH (CE)			
		1EL090000-0017	SWITCH			
		1EL090000-0001	XB4-BS8442 EMERGENCY STOP BUTTON			

	1PN010000-0051	CLAMP BUTTON
	1EL090000-0009	BUTTON
	1EL010000-0046	MAIN SWITCH
	2TU012410-0447	MOVING SETSQUARE
	2TU012210-1751	CLAMP MOUNTING BRACKET

,	3UA046030-0019	PNEUMATIC CLAMP	
	1PN020000-0286	PISTON (PNY-AY 50x280)	
	3UA050030-0025	HYDROCONTROL UNIT	
	1PN020000-0305	PISTON (DMC-A 32x95)	
	3UA110030-0020	LUBRICATOR	
	1PN010000-0012	WATER SPRAY VALVE	

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	1PN140000-0005	1/8-6 FITTING
	1EL070001-0005	MOTOR (4 Kw)
	1SR070000-0032	MOTOR BELT
	1SK010000-0089	SAW BLADE
	1SC140000-0006	HINGE

	3UA040030-0001	M12*60 HANDLE
. v	3UA040030-0005	M8*45 HANDLE
	3UA030030-0005	PIN ,
-	1PL040000-0069	GUARD GLASS

1. GENERAL INFORMATION

1.1. Introduction

The user's manual given by the manufacturer contains necessary information about the machine parts. Each machine operator should read these instructions carefully, and the machine should be operated after fully understanding them.

Safe and efficient use of the machine for long term depends on understanding and following the instructions contained in this manual. The technical drawings and details contained in this manual constitute a guide for the operator.

1.2. Service Information

In case of any technical problem please contact your nearest dealer, or head office through the above mentioned phone, fax or e-mail address.

Technical labels with the model description of the machine are fixed onto the front side of each machine.

The machine's serial number and manufacturing year are stipulated on the technical label.

Average life usage of production is 10 years.

For minimize the documentation, It is dealers of the purchased machines

• Machine model

• Machine's serial number

• Description of the machine fault

• Average daily operation period

• to mention below details at the agreements signed with suppliers and requency

• Voltage and frequency

• Date of purchase

• Name of dealer where machine was purchased

2. SAFETY

2.1. Safety Symbols and Their Meanings

Read the user guide		Ensure safe working position, always keep your balance.
Wear ear protectors	4	Electrical excitation
Wear safety goggles		Don't place your hands between parts in motion
If the power cable should be damaged during operation, don't touch and unplug it. Never use damaged power cables.		High temperature warning
During saw blade change operations, use protective gloves		Keep your fingers clear of the movable parts of the glide arm.
The above symbol DANGER WARNING , warns you against specific dangers, and you have definitely to read them	IMPORTANT	The IMPORTANT symbol above is one telling to apply special care and to be careful at carrying out the specified operation

2.1. Accidents Prevention



- 2.2.1 Our machines are manufactured in accordance with CE safety directives, which cover national and international safety directives.
- 2.2.2 It is the task of the employer to warn his staff against accident risks, to train them on prevention of accidents to provide for necessary safety equipment and devices for the operator's safety.
- 2.2.3 It is the task of the employer to warn his staff against accident risks, to train them on prevention of accidents, to provide for necessary safety equipment and devices for the operator's safety.
- 2.2.4 Machine should be operated only by staff members, who have read and understood the contents of this manual.
- 2.2.5 All directives, recommendations and general safety rules contained in this manual have to be observed fully. The machine cannot be operated in any way for purposes other than those described herein. Otherwise, the manufacturer shall not be deemed responsible for any damages or injuries. And such circumstances would lead to the termination of the warranty

2.2. General Safety Information

- 2.3.1 The power cable should be led in such a way that nobody can step on it or nothing can be placed on it. Special care has to be taken regarding the inlet and outlet sockets
- 2.3.2 Don't overload machines for drilling and cutting. Your machine will operate more safely with power supply in accordance with the stipulated values.
- 2.3.3 Use correct illumination for the safety of the operator. (ISO 8995-89 Standard The lighting of indoor work system)

- 2.3.4 Use correct illumination for the safety of the operator. (ISO 8995-89 Standard The lighting of indoor work system)
- 2.3.5 Don't use any materials other than those recommended by the manufacturer for cutting operations on the machine.
- 2.3.6 Ensure that the work piece is clamped appropriately by the machine's clamp or vice
- 2.3.7 Ensure safe working position, always keep your balance.
- 2.3.8 Keep your machine always clean for safe operation. Follow the instructions at maintenance and replacement of accessories. Check the plug and cable regularly. If damaged, let it replace by a qualified electrician. Keep handles and grips free of any oil and grease.
- 2.3.9 Unplug first, before conducting and maintenance works.
- 2.3.10 Ensure that any keys or adjustment tools have been removed before operating the machine...
- 2.3.11 If you are required to operate the machine outside, use only appropriate extension cables.
- 2.3.12 Repairs should be carried out by qualified technicians only. Otherwise, accidents may occur.
- **2.3.13** Before starting a new operation, check the appropriate function of protective devices and tools, ensure that they work properly. All conditions have to be fulfilled in order to ensure proper operation of your machine. Damaged protective parts and equipment have to be replaced or repaired properly (by the manufacturer or dealer).
- 2.3.14 Don't use machines with improper functioning buttons and switches
- 2.3.15 Don't keep flammable, combustive liquids and materials next to the machine and electric connections.

3. MACHINE'S DESCRIPTION

Mitre cutting machines designed for straight and angle cutting of PVC and Aluminium profiles.

- Two hand control system application is available in terms of employee safety.
- Positive locating pin lock at 0-15°- 22, 5°- 30°- 45°- 60° and 75° intermediate angles set with a table lock.
- > Hydro-pneumatic saw blade feed with variable speed control to suit different profiles & materials
- Saw complies with CE Safety Directives

STANDARD ACCESSORIES	OPTIONAL ACCESSORIES
1SK010000-0089 700 mm Circular Saw	Additional 700 mm saw blade
Air Gun	
Cooling system	
3UA970030-0003 Horizontal pneumatic clamp	OS :

4. TRANSPORT OF THE MACHINE



- 4.1. The transport should be done by qualified personnel only.
- 4.2. The machine should be transported by lifting with proper equipment (not touching the ground during the transport).
- 4.3. Unless customer requests the contrary, the machine will be delivered with wooden packaging.
- 4.4. Movable parts on the machine should be fixed before carrying out the transport.
- 4.5. The machine size and weight measurements, given the technical specification sheet.

5. INSTALLATION OF THE MACHINE

5.1 Preparation

- 5.1.1 The machine size and weight measurements, given the technical specification sheet. The ground, where the machine will be placed, should be even, solid enough to bear the weight of the machine
- 5.1.2 The machine should be located approx. 100 cm away from the rear wall
- 5.1.3 You can provide the balance of the machine with adjustable counterforts (FIGURE 1 NO.1-2) in the bottom part.
- 5.1.4 Fasten conveyor (FIGURE 1 NO.59) onto the cutting unit to the right side surface of the machine as seen in the FIGURE 1 by using the screws on the machine. Provide the conveyor bobbins and machine top surface to be the same parallelism by using a sensitive and calibrated water gauge.
- 5.1.5 Side protective covers (FIGURE 1 NO.55/56) are sent as demounted. Mount the covers as shown on the figure 1.
- 5.1.6 Shaving manifolde (FIGURE 2 NO.15) are sent as demounted. Mount the manifold as shown on the figure 2.
- 5.1.7 To use shaving manifolde, the absorbtion flowrate of air for dry chips has to be thought min.20m/sec. 28 m/sec absorbtion flowrate of air wet chips (>=%18 humidity) can be decided to operate the manifolde

5.2 Connecting to Power Source

- **5.2.1** The Electrical connection must be made by a licensed electrician
- **5.2.2** The power outlet socket on the machine should be available.
- **5.2.3** Plug the machine to a grounded socket.



- 5.2.4 Main voltage of the machine is given on the technical label.
- **5.2.5** Check the power source voltage. It has to be in accordance with the values stipulated on the machine's type label.
- 5.2.6 After electrical connection is made, machine must be operated in idle running and it must be controlled whether rotation directions of cutting tools are correct or not and if the rotation direction is wrong, appropriate connection must be made.

6. MACHINE SAFETY INFORMATION

- 6.1 Lifting, installation, electric maintenance of the machine should be carried out by qualified personnel only.
- 6.2 Routine maintenance and scheduled maintenance should be carried out by qualified personnel after unplugging the machine first.
- 6.3 Ensure that the machine has been cleaned, tested and maintained before starting to operate it.
- 6.4 Check the safety devices, power cable and moving parts regularly. Don't operate the machine before having replaced defective safety devices or faulty parts.
- 6.5 Never replace the milling cutters before unplugging first.



- 6.6 Keep foreign materials away from the working area of the machine, keep away from the machine's moving parts
- 6.7 Do not work on the machine by removing the protective parts



The safety data have been defined above. In order to prevent physical damage or damage to the equipment, please read the safety information carefully and keep the manual always in an easy accessible place.

7. OPERATION

7.1 Preparation

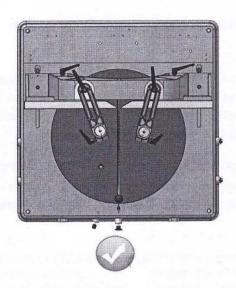
- 7.1.1 Degrease and dry the machine table. Especially ensure that the holding grips and handles are clean and dry.
- 7.1.2 Clean all surfaces of the machine from chip and foreign particles. Use eye glasses for protection.
- 7.1.3 This machine can process on products manufactured from rigid plastic and aluminum materials that don't include iron alloy.
- 7.1.4 Control whether cutting tool (FIGURE 3 NO.34-26) is inserted safely to their places.
- 7.1.5 Control cutting tools against corrosion, distortion and fractions. If cutting tools are damaged, change them.
- 7.1.6 Cutting tool must process on the part after machine is operated and cycled.
- 7.1.7 Absolutely control the direction of rotattion of the saw.

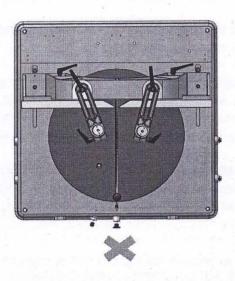


7.1.8 Do not process the profile before clamping the work piece properly.



7.1.9 While making cutting on the machine, be careful about clamps' being out of the cutting area of the saw.





7.1.10 Adjust the reducer speed adjustment screw (FIGURE 2 NO.7) by rotating in the direction of clockwise until providing the desired progress if the saw group cutting progress is fast. Make the opposite of the above action if the saw group cutting progress is slow.

7.2 Operation

- 7.2.1 Switch the system start switch to "1" (FIGURE 1 NO.17-3)
- 7.2.2 Open the top cover (FIGURE 1 NO.51) with the help of button (FIGURE 1 NO. 17-4-1) on the control panel. The top cover operates pneumatically.
- 7.2.3 It is possible to make a straight or slanted cut on this machine. 0-15 22.5 30 45 -60 and 75 degrees can be adjusted with the help of a safety catch (FIGURE 2 NO.27), and the other interim degrees with the help of a special clamping screw (FIGURE 2 NO.31). The safety catch is not seated in the slot in interim degrees. Tighten the clamping screw after turning the turntable (FIGURE 2 NO. 14) to a special degree you desire.
- 7.2.4 In order to make a slanted cut pull the rod of the safety catch (FIGURE 2 NO.27) out of the slot of the safety catch. Simultaneously move the turntable (FIGURE 2 NO.34) with your other hand to a degree you want with the help of plastic handle (FIGURE 2 NO.34-1). You can read the angle values with the help of a degree reader (FIGURE 2 NO. 28) on the table (FIGURE 2 NO.26).
- 7.2.5 In order to provide the right or left movement of the movable setsquare (FIGURE 2 NO.37) loosen the fixing pipe (FIGURE 2 No.36) by turning half-round. Towards the right or left direction of the movable setsquare after completing the movement, provide the parallelism of the movable setsquare against each other in both of the setsquares with the help of the setscrews on the fixed setsquare (FIGURE 2 NO. 35). After finishing all of the settings fix the setsquares by tightening the fixing pipes.

IMPORTANT

Distance between set screws can not be less than table channel's dimension. (Dimension of TABLE CHANNEL is 8 mm.)

7.2.6 Place the PVC or aluminum profile that you will work with on the tray (FIGURE 2 NO.26). Using the clamp button (FIGURE 1 NO.17-4-2) located on the control Panel (FIGURE 1 NO.17) fix the material with the clamps (FIGURE 2 NO. 46/50) located on the setsquare.

- 7.2.7 The vices are applied pneumatically in 700 models. You can adjust the back and forth and up and down position of the vices with special clamping parts (FIGURE 2, NO.48/49). Control of pneumatic clamps is made by buttons (FIGURE 1 NO.17-4-2) on the panel (FIGURE 1 NO.17).
- 7.2.8 Adjust the clamping pressure setting of pneumatic vise with the switch (FIGURE 1, NO.17-6) on the control panel.
- 7.2.9 Close the top housing cover (FIGURE 1 NO. 51) using the button (FIGURE 1 NO. 17-4-1) on the control panel. Cutting operation can not be done on the machine without closing the protection cover and the clamp on the grounds of safety.
- 7.2.10 Let the saw turn by pressing the Motor Start button (FIGURE 1 NO.17-5) on the control panel.
- 7.2.11 Provide the uplift of the saw by pressing on the double hand safety buttons (FIGURE 1 NO. 17-1) at the same time. Continue to press the buttons until the part is cut off.
- 7.2.12 Remove your hand pressure on the buttons after the cutting process is completed. Cutting tool will return to the home position.
- 7.2.13 In particular, when aluminum material is cut through, it is recommended to use the cooling system. You can adjust the flow rate of the coolant by using the injection valve (FIGURE 3 NO.34-25).
- 7.2.14 Open the cover of the upper housing (FIGURE 1 NO. 51)
- 7.2.15 Take the part out by opening the vice.
- 7.2.16 Use the motor stop button to stop the saw rotation.



NOTE: Remove the pressure on the cutting buttons in a possible hazard, or press the emergency stop button. (FIGURE 1 NO.17-2)

7.2.17 Switch the system start switch to "0" (FIGURE 1 NO.17-3)

8. MAINTENANCE, SERVICE AND REPAIR

8.1 Maintenance

- 8.1.1 Cut the electric and pneumatic power connections of the machine.
- 8.1.2 Clean all surfaces of the machine from burs, chips and foreign substances. If the machine will not be used for a long time, lubricate undyed parts with oil that prevents rusting.
- 8.1.3 When cleaning the machine, do not use materials that may damage the dye.
- 8.1.4 Control cutting tools against corrosion, distortion and fractions. If cutting tools are damaged, change them.
- 8.1.5 Before using cutting tool, operate the machine out of gear and control whether it is inserted correctly, it is without flexure and it is inserted appropriately. Do not use cutting tools that are damaged or lost its functionality.
- 8.1.6 If the sawteeth are blunted, change a new / sharpened saw.
- 8.1.7 Sharpen with proper sharpening machines by taking the angular value of the saw into consideration.

8.2 Changing the cutting tool

- 8.2.1 Cut the electric connection of the machine.
- 8.2.2 Open the complete panel as a cover. (FIGURE 1 NO. 17).



NOTE: Make sure not to damage the components inside the cabinet.

8.2.3 Remove the cover of the housing by removing the four Butterfly nuts located on the saw protective enclosure (FIGURE 3 NO.34-22). (FIGURE 3)

- 8.2.4 Remove the M10 screw (FIGURE 3 NO.34-22) with the help of an 8 mm Allen wrench. When removing the bolt hold saw shaft (FIGURE 4 NO.34-5) from the other end with a 19 mm wrench.
- 8.2.5 Remove the string (FIGURE 3 NO.34-28) and saw coupling (FIGURE 3 NO.34-27) respectively.
- 8.2.6 Take out the saw blade (FIGURE 3 NO.34-26) carefully.
- 8.2.7 Install the new saw blade onto the shaft ensuring the correct rotation direction.
- 8.2.8 Install the guard group parts applying the reverse order as described above.
- 8.2.9 It is necessary to sharpen / replace the saw blade in certain intervals depending on the cutting material. If the cut material leaves burr after the cutting operation or if the saw blade is strained, it needs to be sharpened / replaced.
- 8.2.10 During saw blade change operations, use protective gloves.

8.2.11

Saw must be selected according to standart DIN EN 847-1.

teeth of the saw blade would be damaged and even broken.





8.2.12 A saw blade rotating in reverse direction, causes danger both for the operator and the equipment. The

8.3 Changing the belt

- 8.3.1 Cut the electric connection of the machine.
- 8.3.2 Dismantle the Saw by applying the saw replacement process (Clause 8.2).
- 8.3.3 After taking the saw out, put the saw somewhere in the casing of the machine or take it out by removing saw housing connection screws (FIGURE 3 NO.34-22).
- 8.3.4 Take out the connection screws (FIGURE 4 NO. 34-11) of the belt housing (FIGURE 4 NO.34-10) by removing them.
- 8.3.5 Loosen the motor connection bolts (FIGURE 4 NO.34-12) with the aid of 6 mm allen switch.
- 8.3.6 Provide the slackening of the belt (FIGURE 4 NO. 34-9) by pushing the Motor (FIGURE 4 NO. 34-6) upwards.
- 8.3.7 Change the new belt with the previous one. Be careful when fixing the belt to the channels of balancing wheel (FIGURE 4 NO.34-7/34-5) of the channels of the belt.
- 8.3.8 After placing the new belt in its seat, arrange tensioning of the belt by turning belt tensioning part (FIGURE 4 NO. 34-8) with the help of 8 mm Allen wrench. After you set to the appropriate tension, tighten the motor connection bolts (FIGURE 4 NO. 34-12) with your unused hand without leaving the part.
- 8.3.9 Fix the removed parts by following the reverse sequence that your removed them before.

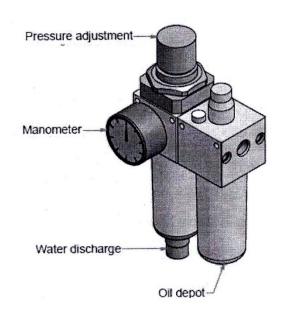
8.4 Angular and run out adjustment control of saw blade and set sguare

- 8.4.1 Cut the electric connection of the machine.
- 8.4.2 Control the run out of the saw blade with eyes. If possible use a dial gage.

8.4.3 If there is any problem in the inclined cut, control the saw's 90 degrees orthogonal to the set square with the aid of the set-square. If it is not proper, loosen the stay bolt at the top which tightens the spring (FIGURE 2 NO.63) Have the pin located to its place by turning the spring in way that it can provide it to be proper by setting it to the 90 degrees. Tighten the screw at the top again which fastens the spring.

8.5 Adjust the air pressure (pneumatic systems)

- 8.3.1 Pull up pressure adjustment valve. Set adjustment valve to the desired value on manometer by turning it clockwise or counter clockwise. Then lock the valve by pressing it down.
- 8.3.2 Set the air pressure between 6 and 8 BAR. If air pressure drops below the stated values, accessories operating with pneumatic power do not work.
- 8.3.3 Conditioner unit accumulates the water in the air in the collection container so that it won't damage pneumatic components. At the end of the working day, empty the accumulated water by opening water discharge valve under the collection container.
- 8.3.4 In order to put oil to the oil tank, remove the reservoir by turning. Oils recommended by the manufacturer are; TELLUS C10 / BP ENERGOL HLP 10 / MOBIL DTE LIGHT / PETROL OFISI SPINDURA 10.



9. TROUBLESHOOTING GUIDE

Here are some recommendations for solving urgent problems. If the trouble cannot be solved, or if you have a problem other than those described hereunder, please contact our technical service or your nearest dealer.

TROUBLE	CAUSES	REMEDY
Low surface quality (at aluminum and similar materials) :	Not cooling the saw blade surfaces	Lubricating the saw blade cutting surfaces,
Rough surface,		Using of cooling liquid
Large chip,	Using of damaged or blunt saw blade	Check the saw blade teeth. Replace if necessary.
Not homogenous surface, Saw blade traces visible	Saw blade moves to quick	The cutting speed is too high for the material. Decrease the cutting speed.
Motor does not work (Start button is pressed, not working)	No power supply to the machine.	Check the electric cable connections. Check the electric power sockets.
Motor is working but the pneumatic clamp pistons do not work.	The air supply connections are missing, or the air pressure is too low.	Check the air compressor connections. Adjust the air pressure between 6-8 Bar on the conditioner.
The saw blade rotates in reverse direction.	The electric connection, the power cable or the connection at the panel is wrong.	Let the electric connections carry out by a qualified electrician.

ELECTRICAL AND PNEUMATIC DIAGRAMS

