



**PEGASUS-02 P / SKAT-02 P**  
**PEGASUS-02 M / SKAT-02 M**

MITER SAWS  
OPERATING AND SAFETY INSTRUCTIONS



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## **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. DISTRIBUTOR**

ATech Machine, Inc.

429 E. Diamond Ave. #F – Gaithersburg, MD 20877 USA

Phone: +1-301-556-9789 Toll Free: 1-866-80A-TECH Fax: +1-301-542-0140

Website: [www.atechna.com](http://www.atechna.com) E-mail: [info@atechna.com](mailto:info@atechna.com)

In case of any technical problem please contact your nearest ATECH dealer, or ATECH 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.

## **2. MACHINE'S DESCRIPTION AND PURPOSE OF USE**

### **2.1. MACHINE'S DESCRIPTION**

Portable miter saw for serial cutting of PVC, aluminum and wooden profiles in desired angles. The operator has the possibility to adjust the cutting speed of the saw blade via knob according to material type and size.

- Cutting at fixed angles of 15°-22.5°-30°-45°-90°, and at intermediate angles via fixing arm. Machine has been designed according to CE Safety Directives.
- PEGASUS-02 M / SKAT-02 M : Manual system with base and pneumatic clamps.
- PEGASUS-02 P / SKAT-02 P : Portable manual system.

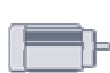


Please mention the below mentioned data in all your correspondence regarding the machine with the manufacturer and/or your ATECH dealer.

- \*Machine model
- \*Machine's serial number
- \*Voltage and frequency
- \*Name of dealer where machine was purchased
- \*Date of purchase
- \*Description of the machine fault
- \*Average daily operation period

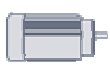
## 2.2. TECHNICAL FEATURES

### Technical Features (American)



<b>SKAT-02 P</b>	3 HP 220V/440V 60Hz	d=1 7/16" D=16"	3000 rpm	--	--	26x24x30"	154 lbs
<b>SKAT-02 M</b>	3 HP 220V/440V 60Hz	d=1 7/16" D=16"	3000 rpm	90-120 psi	0.2 CFM	30x24x53"	253 lbs

### Technical Features (Metric)



<b>SKAT-02 P</b>	2,2kW 400V 50Hz	D=400mm d=30-32mm	3000 rpm	--	--	66x60x76cm	70kg
<b>SKAT-02 M</b>	2,2kW 400V 50Hz	D=400mm d=30-32mm	3000 rpm	6-8 Bar	5 l/min	75x60x134 cm	115 kg

### Technical Features (American)



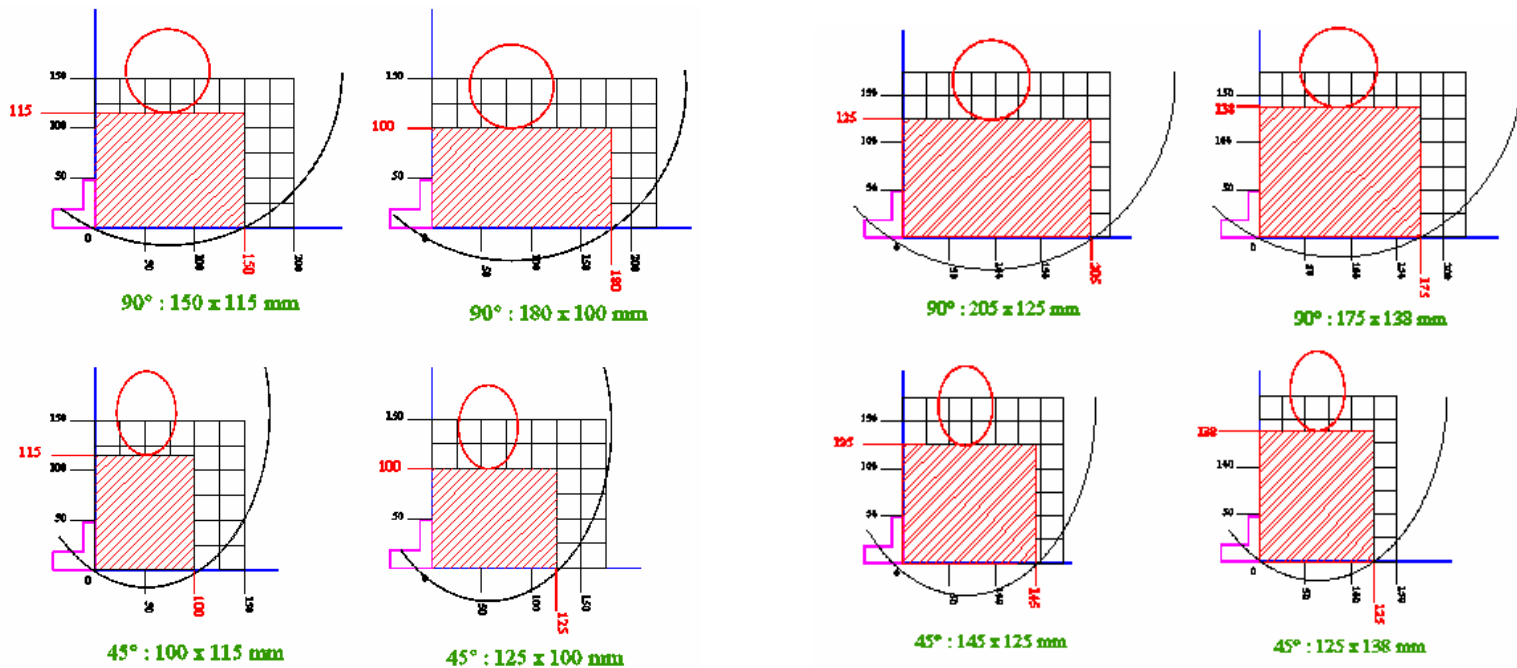
<b>PEGASUS-02 P</b>	3 HP 220V/440V 60Hz	d=1 7/16" D=14"	3000 rpm	--	--	26x24x30"	154 lbs
<b>PEGASUS-02 M</b>	3 HP 220V/440V 60Hz	d=1 7/16" D=14"	3000 rpm	90-120 psi	--	30x24x53"	253 lbs

### Technical Features (Metric)



<b>PEGASUS-02 P</b>	2,2kW 400V 50Hz	D=350mm d=30-32mm	3000 rpm	--	--	66x60x76cm	70kg
<b>PEGASUS-02 M</b>	2,2kW 400V 50Hz	D=350mm d=30-32mm	3000 rpm	6-8 Bar	5 l/min	75x60x134 cm	115 kg

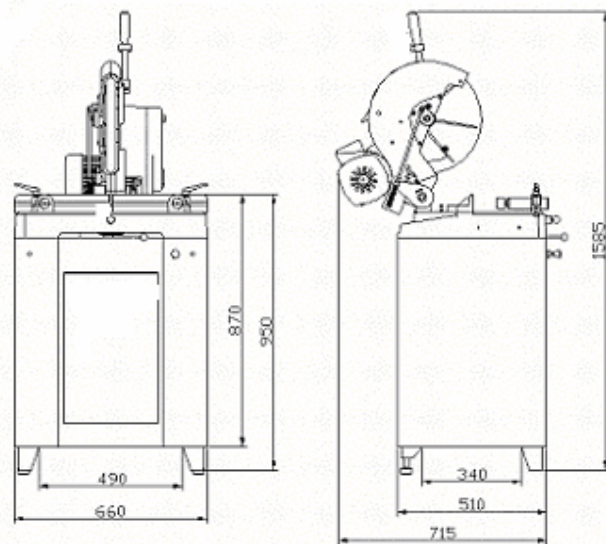
### 2.3. CUTTING DIAGRAM



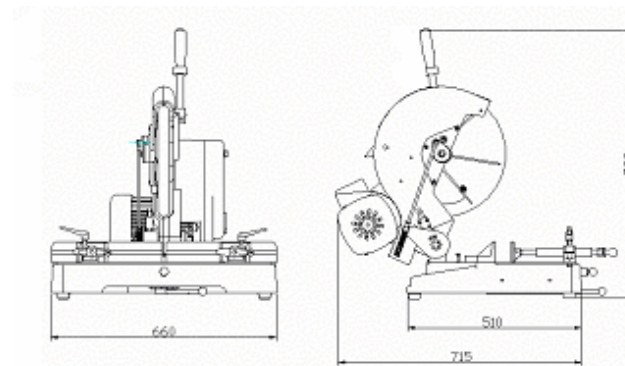
**PEGASUS Cutting Diagram**

**SKAT Cutting Diagram**

## 2.4. OVERALL DIMENSIONS

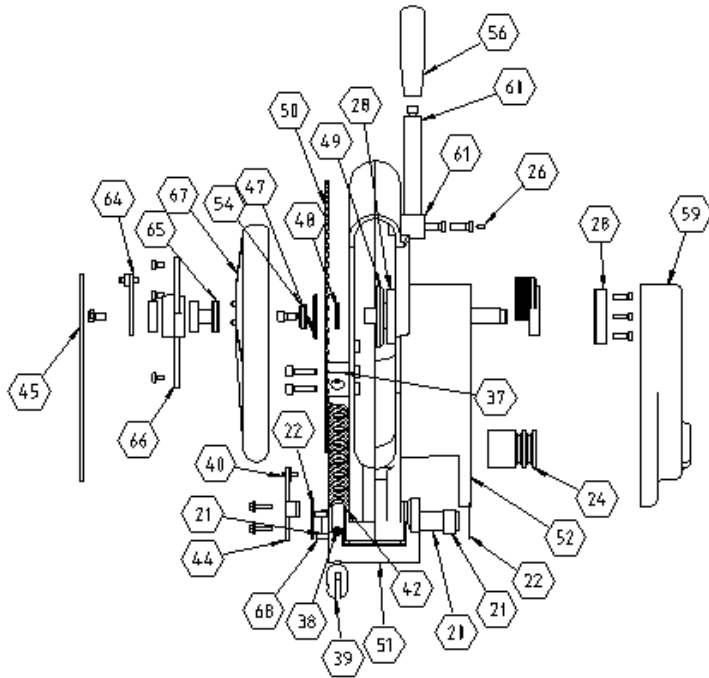


PEGASUS-02 M / SKAT-02 M



PEGASUS-02 P / SKAT-02 P

## 2.5. PARTS LIST AND TECHNICAL DRAWINGS



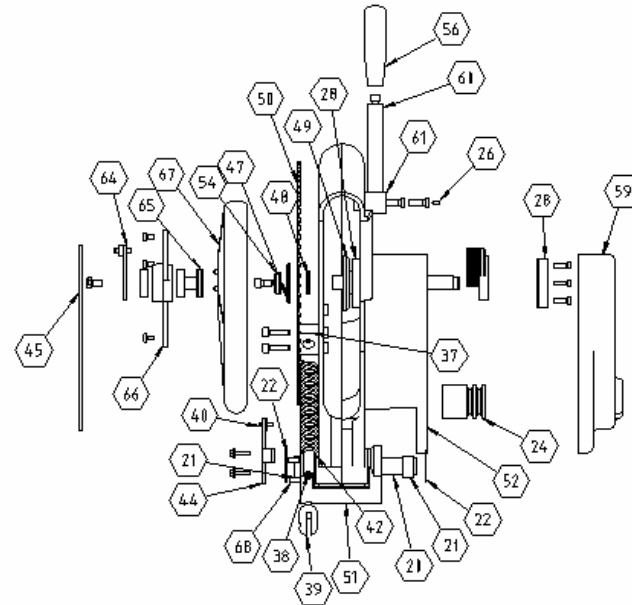
**PEGASUS**

No.	ORDER No.	PART NAME	QTY
20	142-026	FORK SHAFT	1
21	193-009	25x30x15 SINTER BUSHE	2
22	177-023	FORK ADJUSTMENT PIN	2
24	112-020	MOTOR SHAFT PULLEY	1
26	180-001	M6 x10 SCREW	1
28	112-017	BEARING COVER	2
30	141-112	BLADE SHAFT	1
31	112-019	BLADE SHAFT PULLEY	1
37	112-028	SHAFT SUPPORT PLATE	1
38	143-033	SPRING SHAFT	1
39	141-284	SPRING FORK ANKLE	1
40	141-271	FORK SHEET ANKLE	1
42	271-013	PROTECTION SPRING	1
44	141-269	FORK SHEET	1
45	145-025	PROTECTION PLATE	1
47	141-094	OUTER NUT WASHER	1
48	141-092	BLADE WASHER	1
49	114-018	BLADE INNER NUT WASHER	1
50	201-003	SAW BLADE	1
51	111-132	FORK	1
52	111-166	HEAD	1
54	141-093	WASHER 30x8x7	1
56	223-004	BAKELITE GRIP A5-12	1
59	111-167	PULLEY PROTECTION	1
60	141-135	GRIP	1
61	112-023	GRIP CONNECTION	1
64	141-108	PROTECTION ADAPTER	1
65	141-113	BLADE GUARD CONNECTION	1
66	111-169	GUARD HOUSING	1
67	111-170	BLADE GUARD	1
68	180-003	M6 x 16 SCREW	3





No.	Order No.	PART NAME	QTY
20	142-026	FORK SHAFT	1
21	193-009	25x30x15 SINTER BUSHE	2
22	177-023	FORK ADJUSTMENT PIN	2
24	112-104	MOTOR SHAFT PULLEY	1
26	180-001	M6 x10 SCREW	1
28	112-017	BEARING COVER	2
30	141-112	BLADE SHAFT	1
31	112-105	BLADE SHAFT PULLEY	1
37	112-028	SHAFT SUPPORT PLATE	1
38	143-050	SPRING SHAFT	1
39	141-284	SPRING FORK ANKLE	1
40	141-271	FORK SHEET ANKLE	1
42	271-013	PROTECTION SPRING	1
44	150-007	FORK SHEET	1
45	145-064	PROTECTION PLATE	1
47	141-094	OUTER NUT WASHER	1
48	141-092	BLADE WASHER	1
49	114-003	BLADE INNER NUT WASHER	1
50	201-004	SAW BLADE	1
51	111-132	FORK	1
52	111-243	HEAD	1
54	141-093	WASHER 30x8x7	1
56	223-004	BAKELITE GRIP A5-12	1
59	111-244	PULLEY HOUSING	1
60	141-135	GRIP	1
61	112-023	GRIP CONNECTION	1
64	150-028	GUARD ADAPTER	1
65	141-113	BLADE GUARD CONNECTION	1
66	111-169	GUARD HOUSING	1
67	111-245	BLADE GUARD	1
68	180-003	M6 x 16 SCREW	3



SKAT

### 3. SAFETY

#### 3.1. SAFETY INFORMATION

The symbols shown hereunder are necessary to be read with special attention. Not reading or observing of them may cause damage to the equipment or personal injury.

**IMPORTANT**

The IMPORTANT symbol above is one telling to apply special care and to be careful at carrying out the specified operation.

**CAUTION !**

The CAUTION! Symbol above warns you against specific dangers, and requires to read the text. Not observing may cause damage to the equipment.



**DANGER WARNING**

The above symbol DANGER WARNING, warns you against specific dangers, and you have definitely to read them. Negligence may cause damage to the equipment and bodily injury.

Read the user's manual carefully before using the machine or carrying out maintenance works.



#### 3.2. ACCIDENT PREVENTION

**3.2.1.** Our machines are manufactured in accordance with EN 60204-1 and EN 292-2 CE safety directives, which cover national and international safety directives.

**3.2.2.** 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.

**3.2.3.** Before starting to work with the machine, the operator should check the features of the machine, learn all details of the machine's operation.

**3.2.4.** Machine should be operated only by staff members, who have read and understood the contents of this manual.

**3.2.5.** 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.

### **3.3. GENERAL SAFETY INFORMATION**



**3.3.1.** 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.



**3.3.2.** If the power cable should be damaged during operation, don't touch and unplug it. Never use damaged power cables.

**3.3.3.** Don't overload machines for drilling and cutting. Your machine will operate more safely with power supply in accordance with the stipulated values.



**3.3.4.** Don't place your hands between parts in motion.



**3.3.5.** Use protective eye glasses and ear plugs. Don't wear oversize clothes and jewels. These can be caught by moving parts.



**3.3.6.** Keep your working place always clean, dry and tidy for accident prevention and safe operation.

**3.3.7.** Use correct illumination for the safety of the operator. (ISO 8995-89 The Lighting of Indoor Work Systems)

**3.3.8.** Don't leave anything on the machine.

**3.3.9.** Don't use any materials other than those recommended by the manufacturer for cutting operations on the machine.

**3.3.10.** Ensure that the work piece is clamped appropriately by the machine's clamp or vice.



**3.3.11.** Ensure safe working position, always keep your balance.

**3.3.12.** 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.

**3.3.13.** Unplug first, before conducting and maintenance works.

**3.3.14.** Ensure that any keys or adjustment tools have been removed before operating the machine.

**3.3.15.** If you are required to operate the machine outside, use only appropriate extension cables.

**3.3.16.** Repairs should be carried out by qualified technicians only. Otherwise, accidents may occur.

**3.3.17.** 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).

**3.3.18.** Don't use machines with improper functioning buttons and switches.

**3.3.19.** Don't keep flammable, combustive liquids and materials next to the machine and electric connections.

#### **4. TRANSPORT OF THE MACHINE**

**IMPORTANT**

\* The transport should be done by qualified personnel only.

The machine should be transported by lifting with proper equipment (not touching the ground during the transport).

Don't lift the machine before ensuring that lifting devices or other equipment is placed properly under the machine.

## 5. INSTALLATION OF THE MACHINE

The machine should be located at least 40 cm in front of the back wall. The machine is equipped with a burr collection bag connector and power supply socket on the back side.

### 5.1. PREPARATION

**5.1.1.** The outer dimensions of the machine are stipulated in the Dimensions page (Page 6). The ground, where the machine will be placed, should be even, solid enough to bear the weight of the machine.

**5.1.2.** At the miter saws PEGASUS - SKAT all parts are delivered by the manufacturer ready for use.

**5.1.3.** If you have purchased a conveyor, which is offered as an option, connect to either side of the machine as shown in Illustration 1.

**5.1.4.** Before starting the machine, remove the transport safety part as shown in Illustration 2.

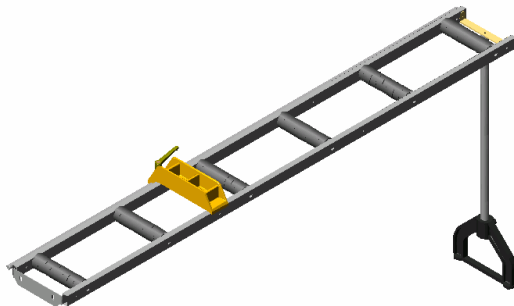
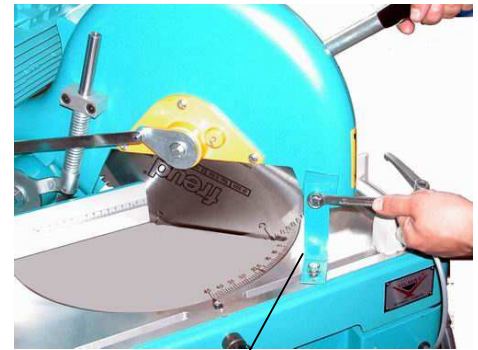


Illustration-1



Head Fixing  
Plate

Illustration-2

## 5.2. ELECTRIC CONNECTION

**5.2.1.** The three-phase power cable socket has to be in accordance with the socket on the machine.

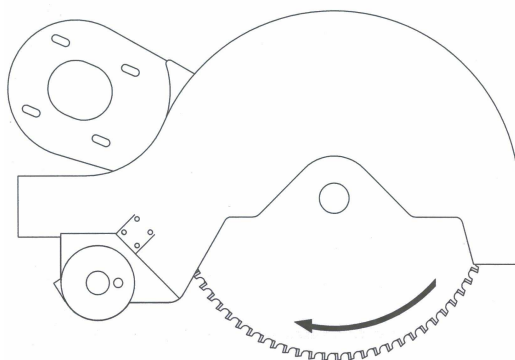
**5.2.2.** Use a connection cable socket in accordance with the CE Safety Directives.

**5.2.3.** Check the inlet power supply before powering the machine. See Page 19 Item 3.8.3.

**CAUTION !**

**\* The socket connections have to be made by a qualified electrician, the rotation direction of the saw blade has to be observed by starting the machine. If the saw blade rotates in reverse direction, the socket connections have to be checked and re-connected properly.**

**\*\*If the saw blade rotates in reverse direction, it will cause danger for the operator and the equipment.**



**Figure-3**

To correct the rotation direction of the saw blade, insert the electric power socket of the machine to the 3-phase slot, which has been prepared before, and follow these instructions:

1. Press the Motor Start Button to operate the saw blade.
2. Press the cutting head down until the blade guard opens.
3. Press the Stop button. Observe the rotation direction of the saw blade through the open part of the blade guard.
4. The correct direction of the saw blade rotation is shown in Figure 3.

**If the saw blade rotates in reverse direction:**

The electric socket connections have to be checked and corrected by a qualified electrician.

The rotation direction of the saw blade should not be defined before testing.



## 6. MACHINE SAFETY INFORMATION

**6.8.1.** It is not allowed to operate the machine with the protective cover and other protective equipment removed.

**6.8.2.** Your machine operates with 220V/440V ~ 3-Phase 60Hz (400V ~ 3-Phase 50Hz) . Let the electric installation of your machine carry out by a qualified electrician only.

**6.8.3.** Lifting, installation, electric, pneumatic maintenance of the machine should be carried out by qualified personnel only.

**6.8.4.** Routine maintenance and scheduled maintenance should be carried out by qualified personnel after unplugging the machine and disconnecting the air supply first.

**6.8.5.** Ensure that the machine has been cleaned, tested and maintained before starting to operate.

**6.8.6.** Check the safety devices, power cable and moving parts regularly. Don't operate the machine before having replaced defective safety devices or faulty parts.

**6.8.7.** Never replace the saw blade before unplugging first.

**6.8.8.** Keep foreign materials away from the working area of the machine, keep away from the machine's moving parts.

**IMPORTANT**

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

The miter saws PEGASUS / SKAT cut non-ferrous aluminum, PVC profiles and PVC materials. The operator adjusts (manually via knob) the cutting speed of the saw blade according to the material type to be cut. Inner and outer sharp edges of the carbide tipped circular saw blade ensures high quality clean cutting results. The cutting length can be precisely read and adjusted using the measuring tape fixed to the back fence.

**CAUTION !**

**Start the machine only after proper clamping of the work piece to be cut.**

The machine is equipped with horizontal clamps. The clamping positions, either manual or pneumatic clamps, can be adjusted comfortably according to the material.

At manual clamps the clamp shaft can be moved 50 mm.

At pneumatic clamps the clamp piston can be moved 55 mm.



**The clamping cylinders have to be outside of the saw blade moving area. (See Illustration 6 and 7)**

**IMPORTANT**

The air pressure of the machine (pneumatic model) has to balance 6-8 Bar (90-120 psi) pressure. Don't operate the machine with an air pressure lower than 6 Bar.

### 7.1. ADJUSTING THE AIR PRESSURE OF PNEUMATIC CLAMPS

**7.1.1.** Pull the adjustment button of the conditioner upwards.

- a-** Turning the adjustment button in clockwise direction increases the pressure
- b-** Turning the adjustment button in counter clockwise direction decreases the pressure
- c-** Once you read 6-8 Bar (90-120 psi) on the manometer, push the adjustment button of the conditioner down and lock it in that position.



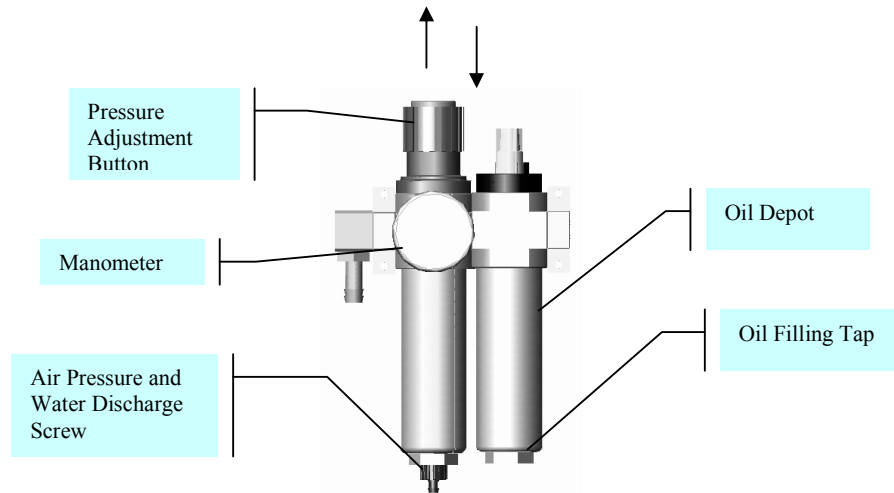


Illustration 3

**7.1.1.** Place the material to be cut on the machine table, take the measure the cutting length using the measuring tape on the back fence, and clamp the work piece (pneumatically or manually).

**7.1.2.** Start to operate the saw blade by pressing the Start button.

**7.1.4.** Carry out the cutting operation by pressing down the cutting head holding the grip.

**7.1.5.** After cutting off the material, bring the cutting grip to its original position, press the Stop button. The saw blade will come to a full stop within 15 sec.

**7.1.6.** Release the clamps (manually or pneumatically) and take out the cut work piece.

**7.1.7.** The conditioner unit collects the water within the air system in a receptacle in order to prevent damage to the pneumatic system components. Discharge this water periodically (at the end of the working day) by pressing or opening the button under the conditioner.

**7.1.7.** The manufacturer recommends to use the following oils with the conditioner: TELLUS C 10 / BP ENERGOL HLP 10/ MOBIL DTE LIGHT / PETROL OFISI SPINDURA 10.



**Don't operate the saw while it touches the work piece. The saw must be operated only when the head is in the top position.**

## 7.2. MITER CUT:

**7.2.1.** Press the saw blade down until it touches the cutting slot of the table.

**7.2.2.** Pull out the snap pin from its slot. (See Illustration 4)

**7.2.3.** Pull the table locking Bar to the left to unlock. (See Illustration 4)

**7.2.3.** Adjust the desired angle by turning the cutting head to the right or left. (See Illustration 5)

**7.2.4.** The cutting angles 15°-22.5°-30°-45° are fixed by releasing the snap. Pull the table locking handle to the right and fix the table (See Illustration 5)

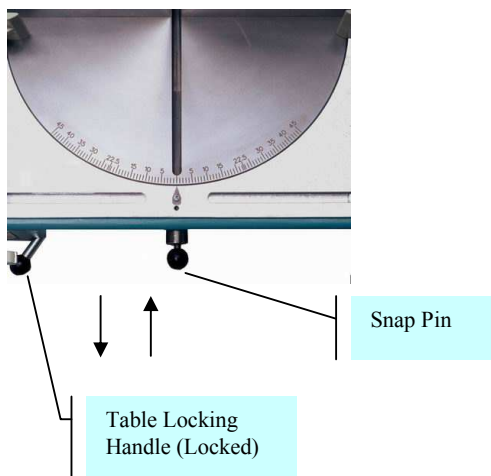


Illustration 4

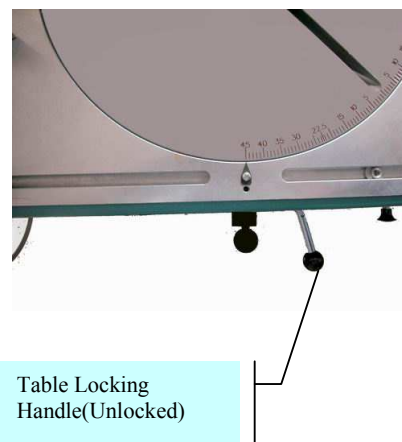
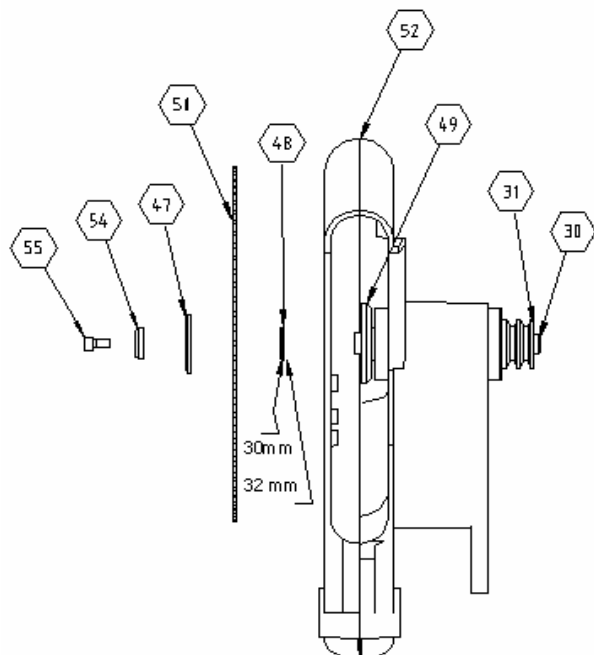


Illustration 5

**7.2.5.** At intermediate angles (5°-10°-15°-35°-40° ...) lock the table by pulling the table locking handle to the right.

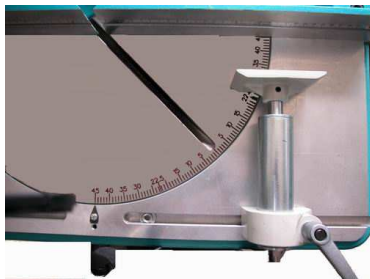


No	Stock No / Part Name	Qty
30	141-112 BLADE SHAFT	1
31	112-019 BLADE SHAFT PULLEY	1
47	141-094 OUTER NUT WASHER	1
48	141-092 BLADE WASHER	1
49	114-018 BLADE INNER NUT WASHER	1
50	201-003 350 mm SAW BLADE	1
50	201-004 400 mm SAW BLADE	1
52	111-166 PEGASUS HEAD	1
52	111-243 SKAT I HEAD	1
54	141-093 WASHER 30x8x7	1
55	172-025 M8x16 HEXAG. SCREW	1

Figure-4

**CAUTION !**

Always ensure that the clamps are positioned outside of the operation area of the saw blade.



**CORRECT**



**WRONG**

## 8. SAFE INSTALLATION OF THE SAW BLADE

**8.1** To remove the circular saw blade from the blade shaft, follow the instructions below.

**8.1.1.** Remove the M8 screw (Figure 4, No. 55) by turning it counter clockwise with a 8 mm hexagonal key. (Hold the saw blade shaft at the opposite end with a 17 mm wrench key and prevent so that the shaft turns.

**8.1.2.** Remove the washer No. 54 and the outer nut washer No. 47.

**8.1.3.** Take out the saw blade carefully.

**8.1.4.** Insert the new saw blade on the saw blade shaft, ensuring correct rotation direction.

**8.1.5.** Insert the other parts (washer, outer nut washer) in reverse order as removal.

**8.1.6.** Tighten the M8 screw while holding the blade shaft with a 17 mm wrench key in fix position. It is necessary to sharpen / replace the saw blade in certain intervals depending on the cutting material.

**8.1.7.** If the cut material leaves burr after the cutting operation or if the saw blade is strained, it needs to be sharpened / replaced.

**CAUTION !**

**8.1.8.** When replacing the saw blade, use the part of the saw blade washer No. 48, which is in accordance with the saw blade shaft diameter. The outer diameter of the blade washer is 30 and 32 mm.

## **9. MAINTENANCE**

### **9.1. PERIODIC CHECKS**

**9.1.1.** Ensure that the table and all kind of parts are clean and dry. Degrease and dry the table. Especially ensure that the holding grips are clean and dry.

**9.1.2.** Remove all burr, chip and foreign materials from all surfaces of the machine. Use protective eye glasses.

**9.1.3.** Check the saw blade before each use. Turn the saw blade carefully (after removing the blade guard) to see the teeth of the saw blade. Replace the saw blade if it is damaged.

**9.1.4.** Check the pressure of the air pressure system. If necessary, adjust the air pressure between 6-8 Bar.  
(See Illustration 3)

**9.1.5.** Check the air pressure filters and the oil level of the conditioner. Fill up if the oil level is low. (See Illustration 3)



**Unplug and disconnect the air pressure connections first, before carrying out these works.**



## 9.2. MAINTENANCE AT THE END OF THE WORKING DAY

**9.2.1.** Disconnect electric and pneumatic connections. (Main Switch must be on “0” position)

**9.2.2.** Remove all burr, chip and foreign materials from the machine surfaces. If it is necessary to clean the inside of the blade guard, remove the front cover, use gloves to protect your hands from the sharp edges of the blade.

**9.2.3.** If water or water based liquids were used during cutting, dry the machine with a dry cloth after the operation is finished.

**9.2.4.** Apply a thin layer of machine oil to protect the table against corrosion. If the machine will not be used for a long time, lubricate with a protective oil.

**9.2.5.** Don't use materials for cleaning the machine, which could damage its paint.

**9.2.6.** Lubricate both surfaces of the saw blade with machine oil in order to protect it against corrosion.

## 10. 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) : Rough surface, Large chip, Not homogenous surface, Saw blade traces visible	Not cooling the saw blade surfaces	Lubricating the saw blade cutting surfaces, Using of cooling liquid
	Using of damaged or blunt saw blade	Check the saw blade teeth. Replace if necessary.
	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.

## 11. ELECTRIC / PNEUMATIC COMPONENTS

### 11.1 ELECTRIC COMPONENTS

ORDER No.	PART NAME	QUANTITY
163-002	MOTOR QS 90 L 2A H 2.2 kW 400V 3 N PE 50 Hz	1
161-005	LE1-M35Q712 MOTOR PATCHER	1
164-013	4x1,5 mm POWER CABLE H0 7RN-F	3,5 m
165-050	ELECTRIC PLUG	1

### 11.2 PNEUMATIC COMPONENTS

ORDER No.	PART NAME	QUANTITY
241-009	FRC-1/8-D-MINI CONDITIONER	1
241-023	SV-1/4-3/2-D-O VALVE	1
550-003	PNEUMATIC CLAMP	2

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