



**MK 420**

**MANUEL ALTTAN ÇIKMA KESME MAKİNESİ  
MANUEL CUTTING MACHINES WITH HIDDEN SAW  
USER MANUAL - KULLANIM KLAVUZU**



01-07

## GARANTİ

İMALATÇI FİRMA UNVANI : YILMAZ PVC ve ALÜMİNYUM İŞLEME MAKİNELERİ SAN.TİC.LTD. ŞTİ  
ADRES : TURGUT ÖZAL BULVARI NO:173 TAŞDELEN 34788 / ÇEKMEKÖY  
İSTANBUL-TÜRKİYE

TELEFON : 0216 312 28 28 PBX  
TELEFAX : 0216 484 42 88

FİRMA YETKİLİSİNİN  
İMZASI ve KAŞESİ :

MALIN CİNSİ : MANUEL ALTTAN ÇIKMA KESME MAKİNESİ

MARKASI : YILMAZ

MODELİ : MK 420

BANDROL ve SERİ No :

TESLİM TARİHİ ve YERİ :

GARANTİ SÜRESİ : 2 YIL

AZAMI TAMİR SÜRESİ : 30 İŞ GÜNÜ

YETKİLİ SATICI FİRMANIN

UNVANI :

ADRESİ :

TELEFONU :

TELEFAX :

TARİH – İMZA – KAŞE :

## **CONTENTS**

### **1. General Information**

- 1.1. Introduction
- 1.2. Information about the manufacturer

### **2. Machine's Description and Purpose of Use**

- 2.1. Machine's description
- 2.2. Technical features
- 2.3. Cutting diagram
- 2.4. Overall dimensions
- 2.5. Part list

### **3. Safety**

- 3.1. Safety information
- 3.2. Accident prevention
- 3.3. General safety information

### **4. Transport of the machine**

### **5. Installation of the machine**

### **6. Machine safety information**

### **7. Operation**

- 7.1. Cutting operation
- 7.2. Slice operation
- 7.3. Changing the saw
- 7.4. Angular adjustment and correctness control of saw blade and set square
- 7.5. Adjust of belt tension

### **8. Maintenance, Service and Repair**

- 8.1. Starting work
- 8.2. Maintenance at the end of working day

### **9. Troubleshooting Guide**

## **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. MANUFACTURER**



Turgut Özal Bulvarı No 173 Taşdelen 34788  
Çekmeköy / İSTANBUL - TÜRKİYE  
Tel : 0090 216 312 28 28 Pbx  
Fax : 0090 0216 484 42 88

e-mail [yilmaz@yilmazmachine.com.tr](mailto:yilmaz@yilmazmachine.com.tr)  
web <http://www.yilmazmachine.com.tr>



- \* In case of any technical problem please contact your nearest YILMAZ dealer, or YILMAZ 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. If you have any further failure and complaint, please inform to our below mentioned technical service by verbal or written**

## **TECHNICAL SERVICE ADDRESS ;**

**Turgut Ozal Bulvarı No 173 TASDELEN 34788 / UMRANIYE / ISTANBUL**

**Tel : 0216 312 28 28 Pbx.**

**Fax : 0216 484 42 88**

**e-mail : [service@yilmazmachine.com.tr](mailto:service@yilmazmachine.com.tr)**

**[yilmaz@yilmazmachine.com.tr](mailto:yilmaz@yilmazmachine.com.tr)**

**web : [www.yilmazmachine.com.tr](http://www.yilmazmachine.com.tr)**

**For minimize the documantation, It is wery necessary to mention below details at the agreements signed with suppliers and dealers of the purchased machines**

\*Machine model

\*Date of purchase

\*Machine's serial number

\*Average daily operation period

\*Voltage and frequency

\*Description of the machine fault

\*Name of dealer where machine was purchased

## **2. MACHINE'S DESCRIPTION AND TECHNICAL FEATURES**

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

Cutting machine with circle saw for cutting PVC,Aluminium and wooden profiles in desired angles.

Ø It has the ability to cut in shape.

Ø Machine working direction is adjustable.

Ø The cutting in 45<sup>0</sup> 60<sup>0</sup> 90<sup>0</sup> degrees angles is by switchblade and the other angles free cutting is possible.

## ACCESSORIES

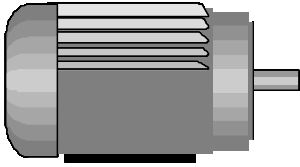
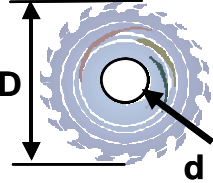
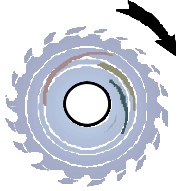
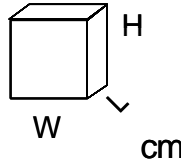

### STANDARD ACCESSORIES

Slice equipment  
Ø420 mm.circle saw  
Support equipment

### OPTIONAL ACCESSORIES

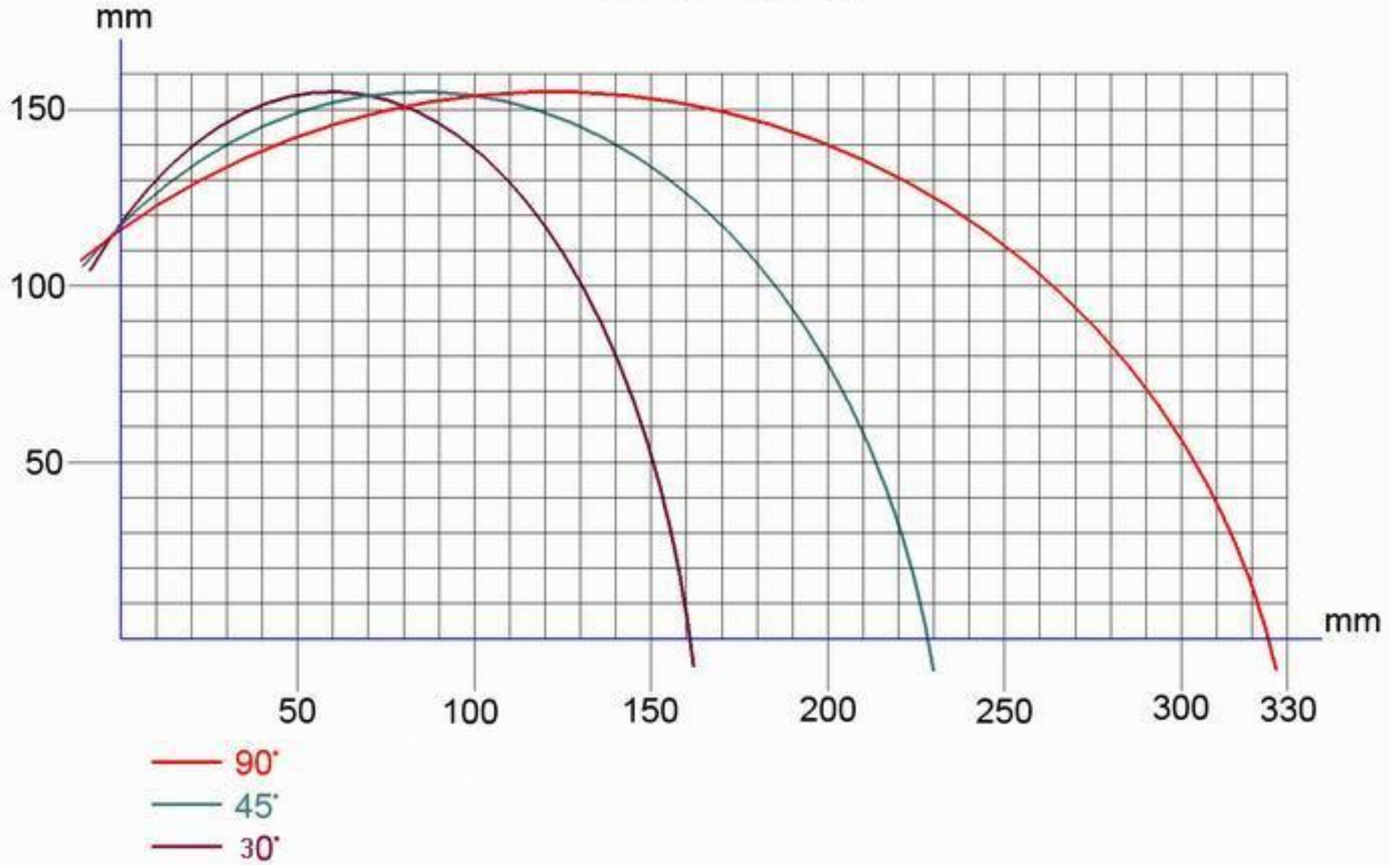
Spray mist cooling system  
Pneumatic Clamps  
Addition Saw Blade

## 2.2 TECHNICAL FEATURES

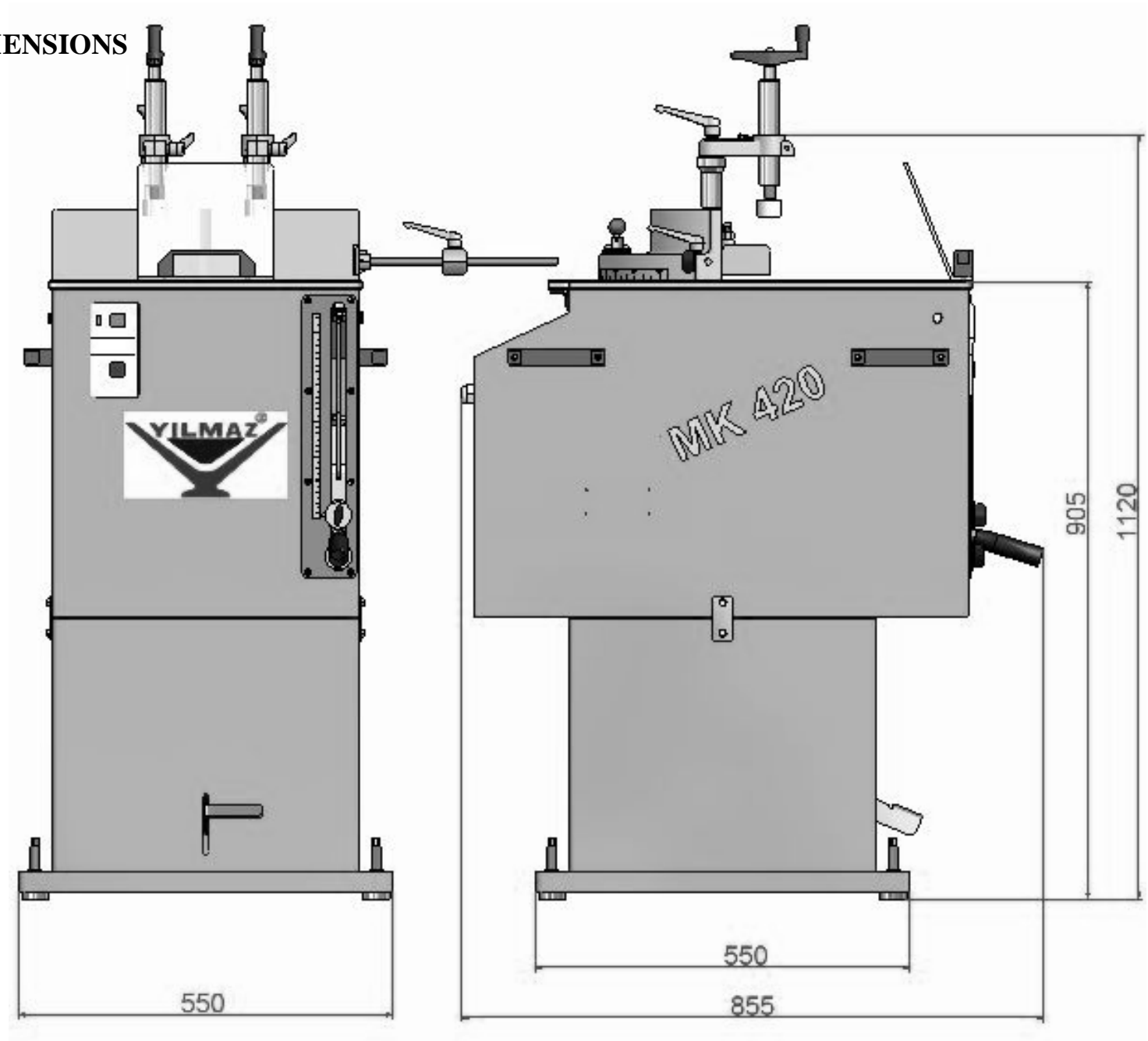
TEKNİK ÖZELLİKLER TECHNICAL FEATURES					 Kg	
<b>MK 420</b>	2.2 kW 50 Hz 400 V AC 3 PE	d= 30 / 32 mm D=420 mm .	3000 dev/dak RPM	63x98x140	132	164

## 2.3 CUTTING DIAGRAM

MK 420 KESME DİYAGRAMI  
CUTTING DIAGRAM



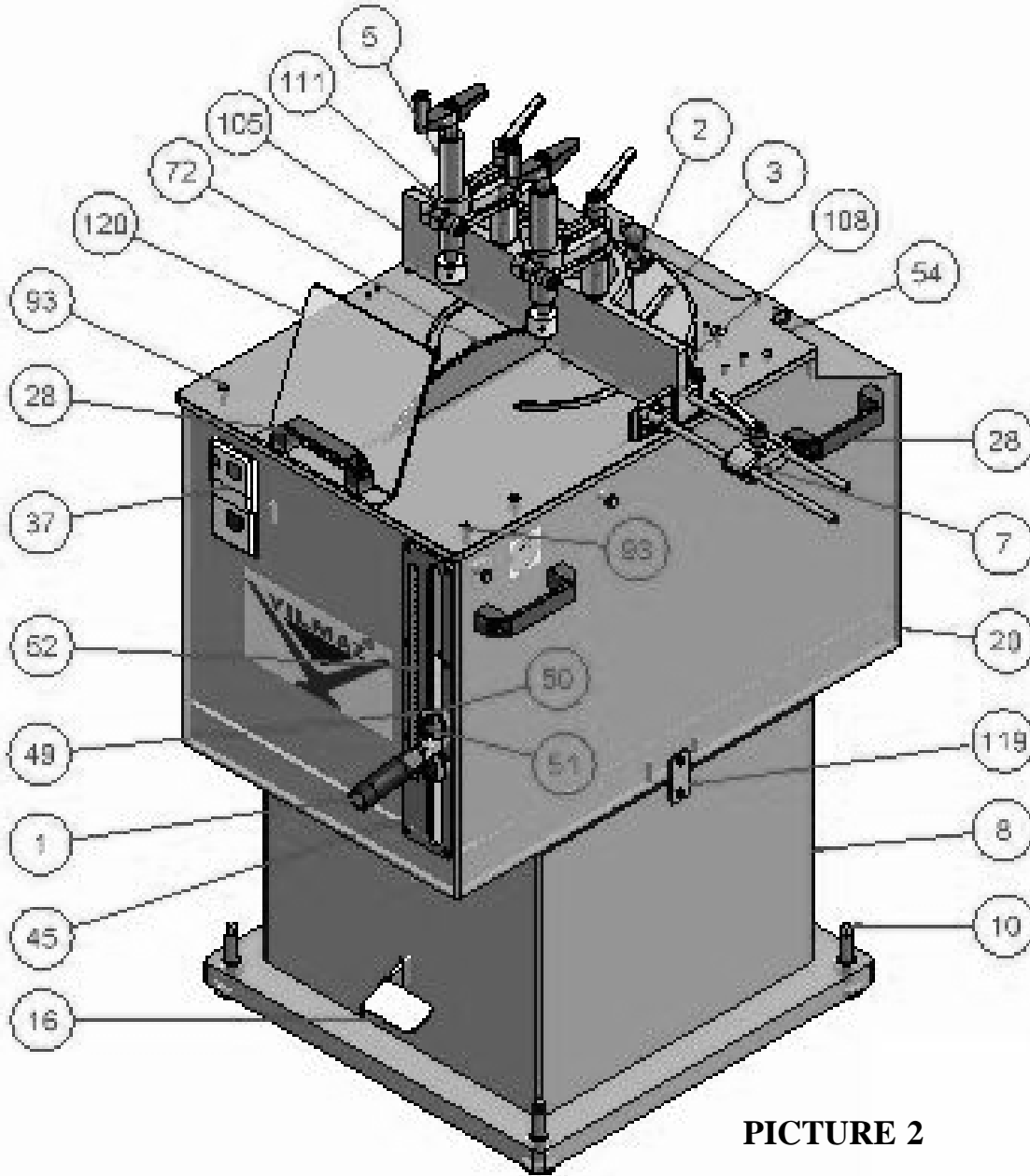
## 2.4 OVERALL DIMENSIONS



PICTURE 1

## 2.5 PART LISTS

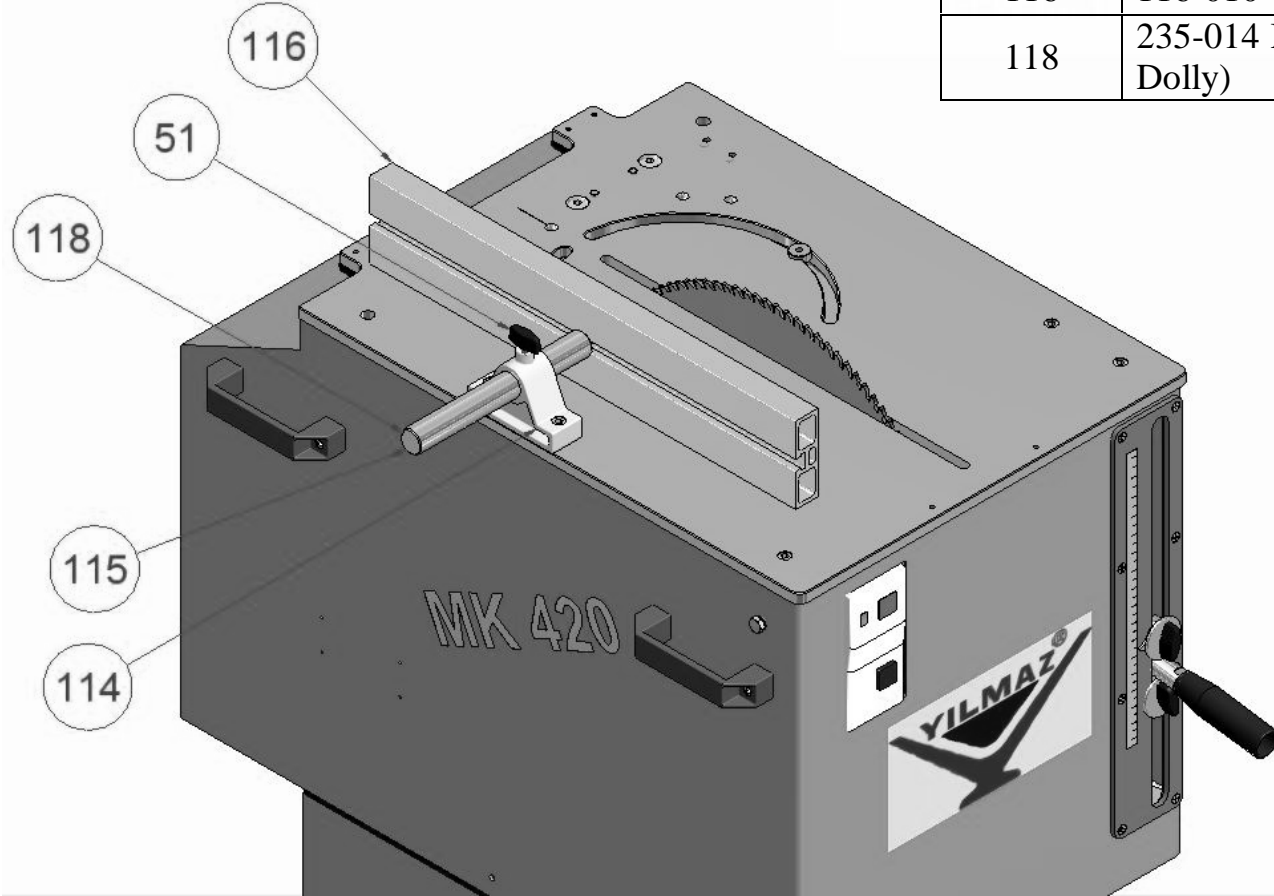




PICTURE 2

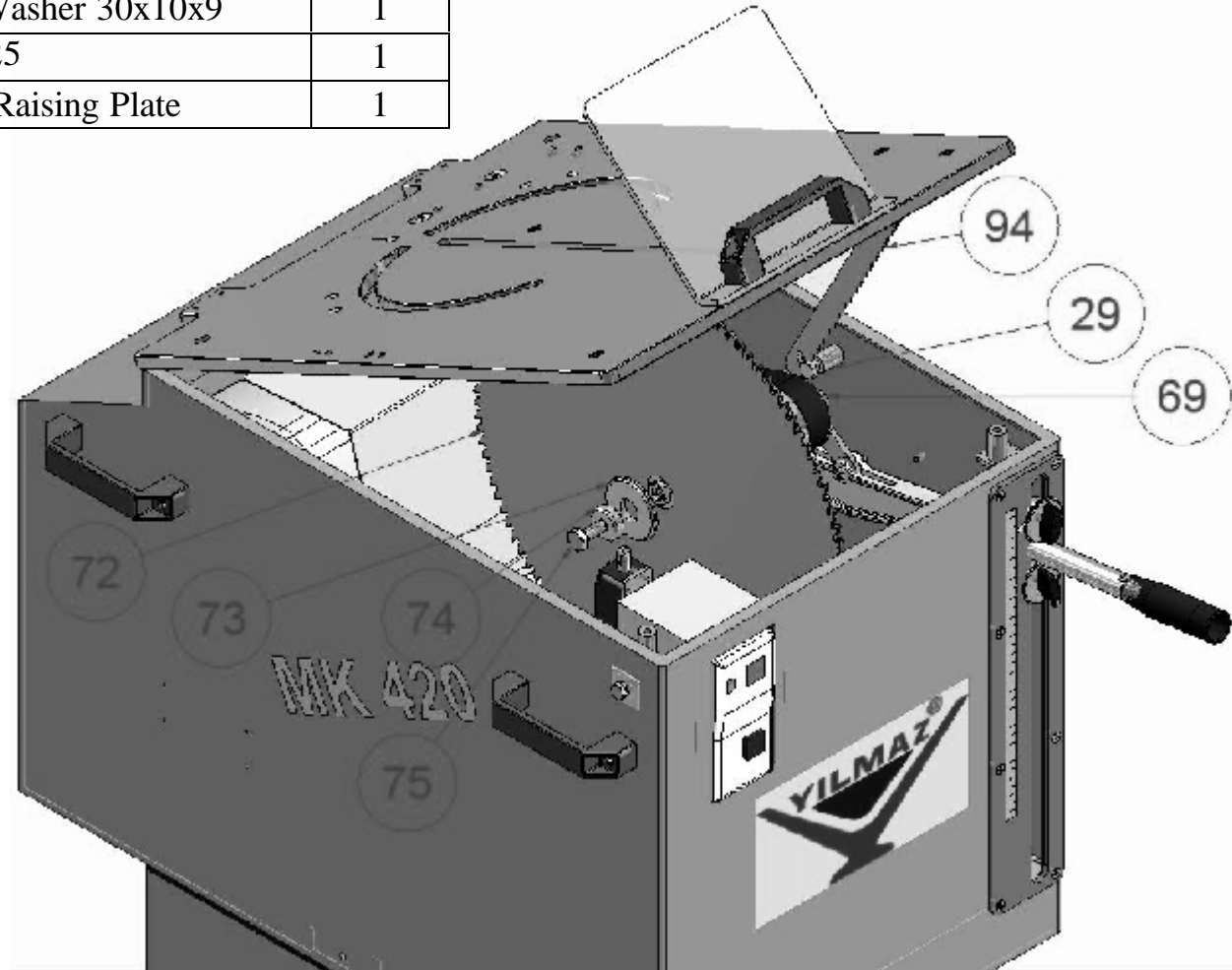
PART NO	PART NAME	QTY
1	221-016 Plastic Handle	1
2	550-138 Switch Blade MK 420)	1
3	550-140 P2-562008 Pipe	2
5	Clamp	2
7	550-031 Dolly (KD 300)	1
8	211-055 01 Frame Bottom Table	1
10	141-442 Foot Adjustment Screw	4
16	150-080 Pedal Plate	1
20	211-055 Frame	1
28	222-010 Cover Handle	5
37	162-068 Motor Starter	1
45	222-074 Handle Housing	1
49	150-074 Meter Reading Washer	1
50	141-501 Handle Fastening Washer	2
51	141-139 Squeezing Handle	5
52	235-013 Ruler (Saw)	1
54	150-093 Table	1
72	201-005 420 MM Saw	1
93	172-025 M8x16 Imbus	6
105	111-291 Set Square	1
108	235-015 S. Square Degree Label	1
111	113-009 Clamp Housing (Mechanic)	2
119	150-102 Frame Connection Plate	2
120	222-061 Front Protector	1

PART NO	PART NAME	QTY
51	141-139 Squeezing Handle	5
114	111-294 Cutting Dolly Shaft Housing	1
115	141-579 Cutting Dolly Profile Shaft	1
116	116-010 Cutting Dolly Profile	1
118	235-014 Measurement Ruler (Cutting Dolly)	1



**PICTURE 3**

PART NO	PART NAME	QTY
29	141-509 Table Raising Plate Dolly	1
69	141-499 Saw Shaft	1
72	201-005 420 mm Saw	1
73	150-085 External Coupling	1
74	141-035 Joint Washer 30x10x9	1
75	171-002 M10x25	1
94	150-078 Table Raising Plate	1



**PICTURE 4**



### **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 DANGER WARNING above warns you against specific dangers, and definitely requires the text to read. Not observing may result in serious bodily injury.**

**Please read the user's manual carefully before using the machine or carrying out maintenance.**

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

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



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

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



3.3.9. Ensure safe working position, always keep your balance.



3.3.10. Don't leave anything on the machine.

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

- 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.**

4.1. The machine should be transported by lifting with proper equipment (not touching the ground during the transport). (The machine can be handled through the side handles (Figure 2. NO.28) )

4.2. Machines are covered with nylon for delivery, unless the customer has not required other method of packing.

4.3. For the weight and overall dimensions of the machine see Technical Features.

## **5. INSTALLATION OF THE MACHINE AND CONNECTION TO THE POWER SOURCE**

### **IMPORTANT**

Remove the bolts and stoppers for fixing the movable parts of the machine for safe transport before making the power connections.

5.1. Place your machine onto an even ground. The machine's overall dimensions are given under **OVERALL DIMENSIONS**. The working place should be appropriate for these dimensions.

5.2 With the aid of adjustable foot (Figure 2 NO.10) adjust the balance of the machine

5.3 Your machine operates under 400V 50 Hz power supply. Let the electric installation carry out by a qualified electrician.

**5.4 Check the rotation direction of the saw after making the electric connection.**





## **6. MACHINE SAFETY INFORMATION**

**Read the user's manual carefully before starting to operate the machine. Follow the instructions in the manual.**

- 6.1 The machine has to operated with 400V 50 Hz. Let the electric installation carry out by a qualified electrician.
- 6.2 Lifting, installation, electric maintenance of the machine should be carried out by qualified personnel only.
- 6.3 Routine maintenance and scheduled maintenance should be carried out by qualified personnel after unplugging the machine first.
- 6.4 Ensure that the machine has been cleaned, tested and maintained before starting to operate it.
- 6.5 Check the safety devices, power cable and moving parts regularly. Don't operate the machine before having replaced defective safety devices or faulty parts.
- 6.6 Keep foreign materials away from the working area of the machine, keep away from the machine's moving parts.
- 6.7 Don't use the machine for improper purposes (for working of iron and ferrous metals)

## **7. OPERATION**

### **7.1. CUTTING PROCESS**

**Before starting to cutting verify the direction of rotation of saw. Label, indicating direction of rotation is placed on the right hand side of the machine**

**After placing the machine remove the frame connection plates (Figure 2 NO.119) used for transportation**

7.1.1 Open the main schalter of the machine.

7.1.2 Place the profile on the table and fasten with the aid of clamps (Figure 2 NO.5). **(The saw might cut the clamp from the ends; be careful while using clamps.)**

7.1.3 Press start button that is placed on the motor starter (Figure 2 NO.37). The saw will start rotating.

7.1.4 Raise the handle (Figure 2 NO.1). Saw will start cutting. Hold the handle raised until cutting process is completed. **(Adjust the movement speed of the saw according to the profile you'll cut (Aluminum, PVC, Wood))**

7.1.5 After completing the cutting process lower the handle slowly.

**\*CUTTING IN ANGLE :** Cutting with an angle can be performed with this machine. For this process loosen the pipes (Figure 2 NO.3) placed on the set square (Figure 2 NO.105). Open the switch blade (Figure 2 NO.2). Then adjust the set square through the angle ruler (Figure 2 NO.108) to the required angle. Angle adjusting point is placed on the table. Then squeeze the pipes. Place the switch blade in its place and perform normal cutting.

(Cutting angles that can be performed by using switch blade is given in TECHNICAL SPECIFICATIONS section. Do not use switch blade in intermediate angles)

\* In fixed length profile cutting modes you can use dolly (Figure 2 NO.7).

\* One can adjust the working side of the machine as requested. Press the pedal (Figure 2 NO.16) located on the bottom frame (Figure 2 NO.8). The frame will move upwards. While you are pressing the pedal rotate the top body through the requested direction and release the pedal.

\* The distance that the saw raises or lowers can be adjusted with the aid of washers (Figure 2 NO.50) on the front side of the frame and with the aid of measurement ruler (Figure 2 NO.52).

## **7.2. CUTTING IN SHAPE PROCESS**

- 7.2.1 For cutting in shape process the machine should be in a position as indicated in Figure 3. First of all loosen the pipes placed on the set square and take out the set square group.
- 7.2.2 Remove the front protector (Figure 2 NO.120).
- 7.2.3 Install cutting in shape apparatus to its place as can be seen in Figure 3 and fasten with a M8 Imbus bolt.
- 7.2.4 Adjust the width dimension of the profile to be cut in shape through the dimension ruler (RESIM 3 NO.118) on the shaft (Figure 3 NO.115) and fix the shaft by squeezing the squeezing handle (Figure 3 NO.51).
- 7.2.5 Adjust the saw raising height through the ruler placed on the front of the machine (Figure 2 NO.52).  
After that by fastening both of the washers, (Figure 2 NO.50) fasten the saw.
- 7.2.6 Operate the machine and get to the back side of the machine.
- 7.2.7 Place the profile on to the table and lean one end of it to leaning profile (Figure 2 NO.116). Feed the profile forward until cutting in shape process is completed.
- 7.2.8 **Stop the machine after finishing working**

## **7.3. CHANGING THE SAW**

- 7.3.1 Disconnect from electric power supply.
- 7.3.2 Hold the saw from the bottom. Loosen the saw fastening washers (Figure 2 NO.50) by half opening the squeezing handles (Figure 2 NO.51).
- 7.3.3 Remove the two M8 Imbus bolts (Figure 2 NO.93) with 6 Allen key placed on the table (Figure 2 NO.54)
- 7.3.4 Raise the table as can be seen in Figure 4 from the handle (Figure 2 NO.28). Meanwhile place the table raising plate's (Figure 4 NO.94) groove, to that of dolly's (Figure 4 NO.29) and put the table in place. The table will stand open itself (Figure 4). **(Be sure that the table is fixed appropriately; otherwise table may fall and cause personel injury)**
- 7.3.5 Take 17 key on one hand and a 15 key on the other. With key 17 hold M10 bolt (Figure 4 NO.75), and with the other key, saw shaft (Figure 4 NO.69) through the key place.
- 7.3.6 Remove M10 bolt and then joint washer and external coupling in order (Figure 4 NO.73 and 74). Then remove the saw and change with a new one. In reverse order install the items you removed.

**IMPORTANT: Install the saw appropriate to direction of rotation. Label, indicating direction of rotation is placed on the right hand side of the machine. Do not forget the tools, used for changing the saw, inside or on the machine after completing the change process.**

7.3.7 After completing saw change raise the table a little bit. Push by hand table raising item (Figure 4 NO.94) backwards and release from the groove, then lower the table slowly.

7.3.8 Fix the table by installing the pre-removed two pieces of M8 Imbus bolts (Figure 2 NO.93)

#### **7.4 ANGULAR ADJUSTMENT AND CORRECTNESS CONTROL OF SAW BLADE AND SET SQUARE**

If you encounter problems during cutting operation (ie. Angular cutting)

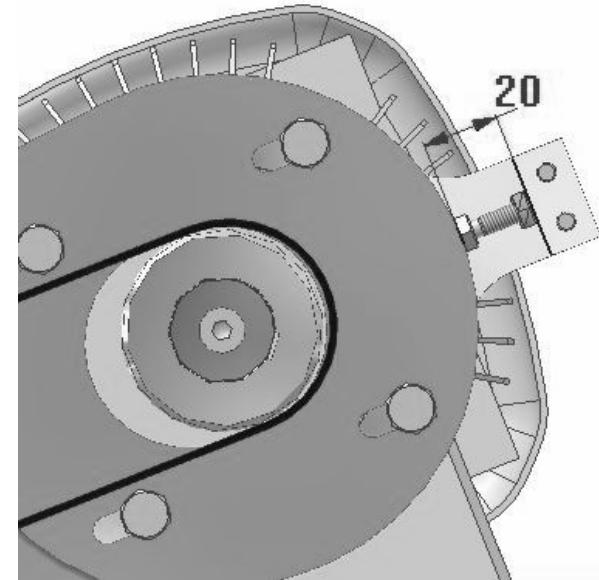
7.4.1 Perform eye control to the run out of the blade. If possible with the help of a dial gauge.

7.4.2 If there exists problem during angular cutting, check the perpendicularity of the saw blade with the help of an edge knife set square. If the perpendicularity is not correct,, loosen the handle nuts that fix the set square (fig2 no3) and nuts that fix the safety catch on the set square. (fig2 no2) Turn the set square smoothly so that the perpendicularity can be achieved according to the saw blade. After adjusting the perpendicularity tighten the handle.and place the safety catch to its position and tighten the nuts again.

#### **7.5 ADJUST OF BELT TENSION**

Adjusting of the belt tension, squeeze the screw shown in PICTURE 5 till given dimension (20 mm). Check the tension of the belt by pressing on the belt with your finger. Stretching distance of the belt should be approximately 10 mm.

**PICTURE 5**



## **8. MAINTENANCE AND CLEANING**

### **8.1. STARTING TO WORK**

8.1.1 Ensure that the working table and all parts are clean and dry. Degrease the table.

8.1.2 Remove all kinds of burr, chip and foreign materials form the machine surface.

### **8.2 MAINTENANCE AT THE END OF THE WORKING DAY**

8.2.1 Disconnect the power supply.

8.2.2 Remove all kinds of burr, chip and foreign materials form the machine surface.

8.2.3 Clean the table and dry it with a piece of cloth (don't use any materials which could cause damage to the machine's paint).



**Disconnect the power supply before carrying out all these works.**

## **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.

<b>PROBLEM</b>	<b>SOLUTION</b>
1. Machine does not work.	1. Control electric power supply. Verify correct connection of cables.
2. Saw is rotating reversely.	1. Control the electrical connection.
3. Quality of Cutting is bad	1. Change the saw. Cutting blade might be worn.