



**TUCANA-02 P
PORTABLE END MILLING MACHINE
USER'S MANUAL**



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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.
10752-A Tucker Street – Beltsville, MD 20705 USA
Phone: +1-301-595-1816 Fax: +1-301-560-6627
Website: www.ATechMachinery.com E-mail: info@ATechMachinery.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 end milling machine designed for precise end milling operations on PVC and Aluminum mullion profiles.

- The machine has been designed in accordance with the CE Directives.
- Clamping and milling operation is manual.



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)						
TUCANA-02 P	800W 120V 60Hz	d=1 7/16" D=Max 4 21/32"	3000 rpm	--	14x20x17"	66 lbs

Technical Features (Metric)						
TUCANA-02 P	800W 230V 50Hz	d=30 mm D=Max.120	3000 rpm	--	--	35x51x42 cm 30 kg

2.3. OVERALL DIMENSIONS

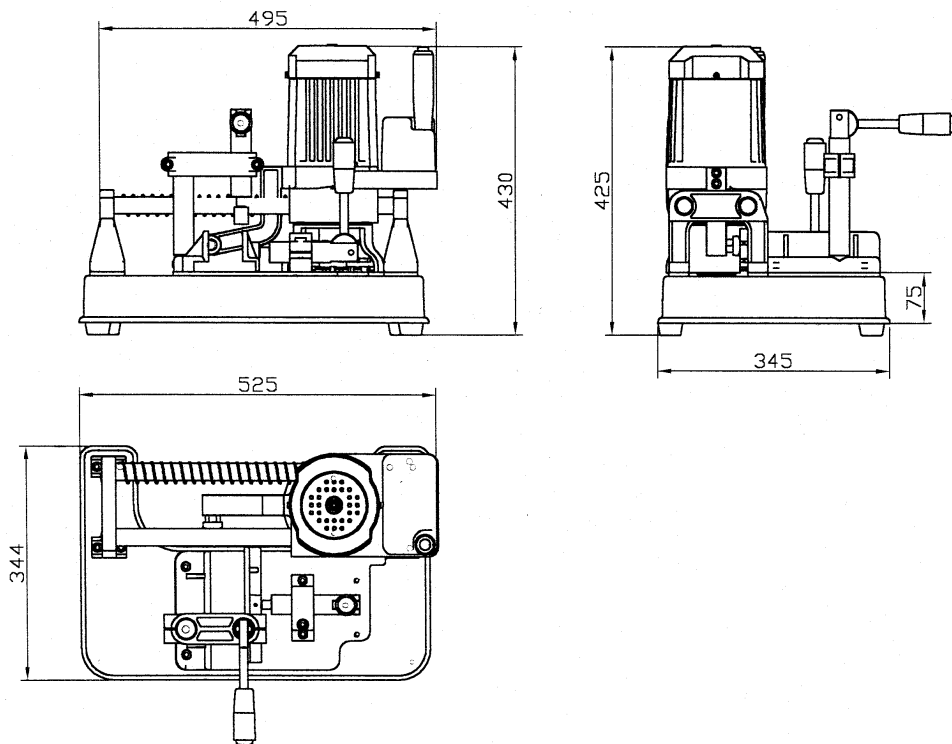


Figure-1

2.4. PARTS LIST AND TECHNICAL DRAWINGS

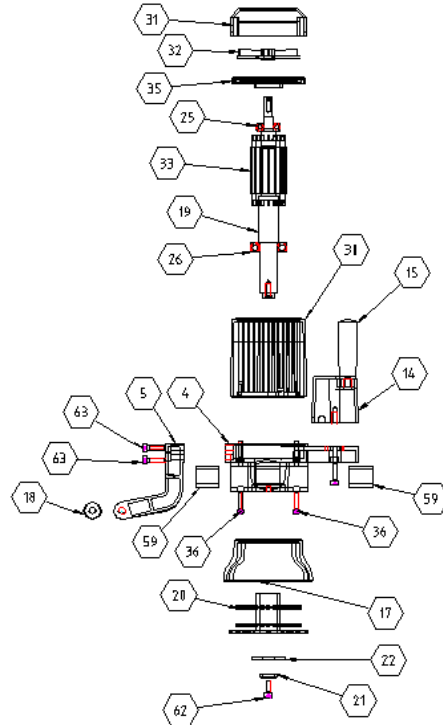


Figure-2

NO.	ORDER NO.	PART NAME	QUANTITY
4	111-118	MOVEMENT HOUSING	1
5	111-119	PROFILE SUPPORT	1
14	111-114	CAPACITOR HOUSING	1
15	223-004	BUTTON SWITCH HANDLE A5-12	1
17	111-116	CUTTER GUARD	1
18	141-141	SUPPORT END	1
19	142-030	ROTOR SHAFT	1
20	202-001	CUTTER GROUP	1
21	141-093	WASHER 30x8x7	1
22	141-094	OUTER NUT WASHER	1
25	191-004	6203 BEARING 17x40x12	1
26	191-009	6206 BEARING 30x62x16	1
30	113-005	MOTOR BODY	1
31	222-006	FAN COVER	1
32	222-005	FAN	1
33	163-009	ROTOR	1
35	113-004	MOTOR BCK COVER	1
36	172-017	M6x30 HEXAGONAL SCREW	4
59	192-008	25x35x40 RING	3



62	172-026	M8x20 HEXAGONAL SCREW	1
63	172-024	M8x30 HEXAGONAL SCREW	13

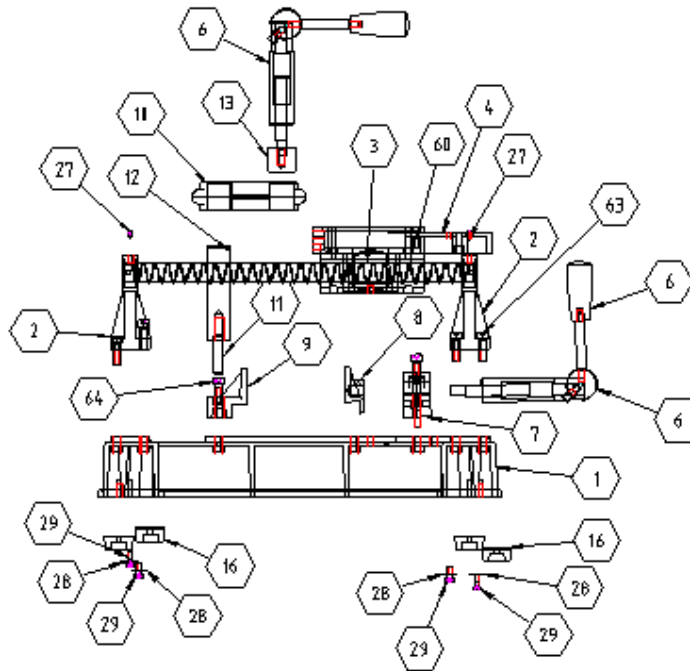


Figure-3

NO.	ORDER NO.	PART NAME	QTY
1	111-117	TABLE	1
2	111-115	SHAFT CONNECTION COLUMN	2
3	144-009	MOVEMENT HOUSING SHAFT	2
4	111-118	MOVEMENT HOUSING	1
6	550-027	MECHANIC CLAMP	2
7	111-099	LOWER CLAMP HOUSING	1
8	111-103	CLAMP SHOE	1
9	111-101	SET SQUARE FENCE	1
10	111-106	UPPER CLAMP HOUSING	1
11	141-142	CLAMP COLUMN SHAFT BOLT	1
12	141-144	CLAMP COLUMN SHAFT	1
13	222-003	CLAMP PLASTIC END	1
16	224-002	FOOT PLASTIC	4
27	180-001	M6x10 SCREW	4
28	177-023	FORK 6 mm WASHER	5
29	172-014	M6x16 HEXAGONAL SCREW	4



60	271-008	MOVEMENT SPRING	1
63	172-024	M8x30 HEXAGONAL SCREW	13
64	172-027	M8x25 HEXAGONAL SCREW	4

2.6. WIRING DIAGRAM

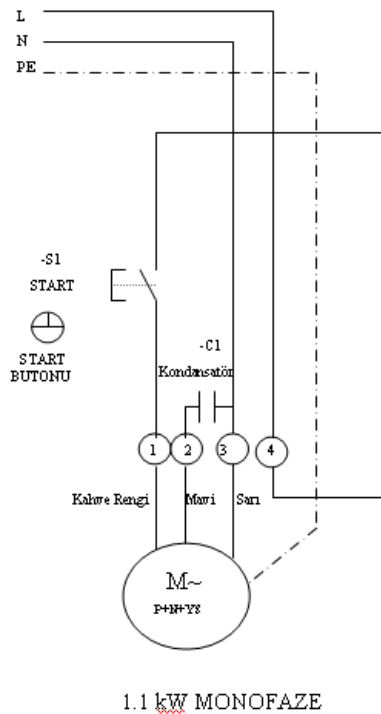


Figure-4

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 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

4.1.1 The transport should be done by qualified personnel only.

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

4.1.3 Keep the carton box packing of the machine for future use.



5. INSTALLATION OF THE MACHINE

5.1 PREPARATION

5.1.1 The machine's dimension are shown in the Technical Features page (Page 5). Place the machine onto an even ground, or on the double tray tool cabinet, which is delivered as option.

5.1.2 The machine should be located approx. 20 cm away from the back wall. The power connection plug is located on the rear side of the machine.

5.1.3 The machine should be located on an even and solid ground.

5.1.4 At the portable end milling machine TUCANA-02 P all parts are delivered ready for use.

5.2 ELECTRIC CONNECTION

5.2.1 The phase electric cable socket has to be in accordance with the machine's plug.

5.2.2 Your machine should be operated with 230 V 50 Hz (110V 60Hz).

5.2.3 Plug the machine into a grounded socket.

CAUTION !

5.2.4 Check the power source voltage. It has to be in accordance with the values stipulated on the machine's type label.

6. MACHINE SAFETY INFORMATION

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

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

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

6.1.4 Ensure that the machine has been cleaned, tested and maintain before starting to operate.



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

6.1.6 Never replace the milling cutters before unplugging first.

6.1.7 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

7.1. STARTING TO WORK

7.1.1 Ensure that the machine table and all kind of parts are clean and dry. 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 Check with the appropriate keys that the milling cutters are tightened well.

7.1.4 Check the milling cutters for wear, bending and breaking. Replace them if damaged.

7.1.5 Our portable end milling machine TUCANA-02 P is used for working of non-ferrous materials, aluminum and PVC mullion profiles to make <T > connections.

7.1.6 Place the mullion profile on the machine table and push it forward until it contacts the stopper (Figure 5, No. 29).

NOTE: The milling length of the mullion profile can be adjusted precisely by loosening the stopper on the machine (Figure 5, No. 29), and fixing it at the desired length.

7.1.7 Manually clamp the work piece, which you have placed onto the machine table and pushed forward until touching the stopper, using the two clamps on the machine (Figure 5, No. 13).

CAUTION !



Don't start to process the work piece before ensuring that it is clamped properly.

7.1.8 Press the Start button (Figure 5, No. 1) to rotate the milling cutter group. While keeping the Start button pressed, push the cutter group with the handle alongside the clamped mullion profile, and move it back to its original position after the milling operation is finished, Release the Start button.

7.1.9 Release the clamps and take out the end milled profile.

IMPORTANT

The milling operation has always to be started from the starting position of the machine. Never start this operation from the opposite side.

NOTE: The milling cutters have to be started freely, without touching the profile. They have to start to rotate first before making the milling operation.

7.1.10 Release the Start button after the milling operation is finished. The milling cutters will come to a full stop within approx. 10 sec. after releasing the Stop button.

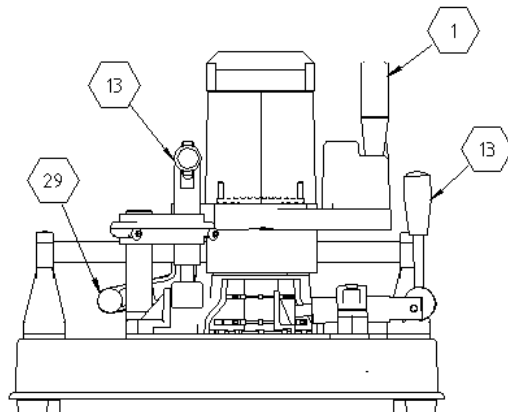


Figure-5

8. INSTALLATION OF THE MILLING CUTTER CUTTERS

8.1.1 If it becomes necessary to replace the milling cutters for any reason, follow the following order for replacement:

8.1.2 Unplug the machine.

8.1.3 Remove the milling cutter group after removing the M8x20 hexagonal bolt with the 6 mm hexagonal key shown in Figure-6 No. 33. After replacing the cutter group, tighten again the hexagonal bolt.



WHEN REPLACING THE MILLING CUTTER GROUP, ENSURE THE CUTTERS ROTATE IN THE CORRECT DIRECTION.

NOTE: Ensure that the milling cutter group has been fixed properly.

CAUTION !

8.1.4 Check the milling cutter group before use. The milling cutter group has to be placed onto the shaft properly (no vibration). Don't use blunt, damaged cutters. Check the machine by running it at least 20 sec. in idle position.

STOCK NO	PART NAME	QTY
172-024	M8x30 ALLEN SCREW	14
202-001	SAW GROUP	1
141-093	WASHER 30x8x7	1
141-094	SAW BLADE SHAFT PULLEY	1
179-005	6 MM ALLEN WRENCH	1

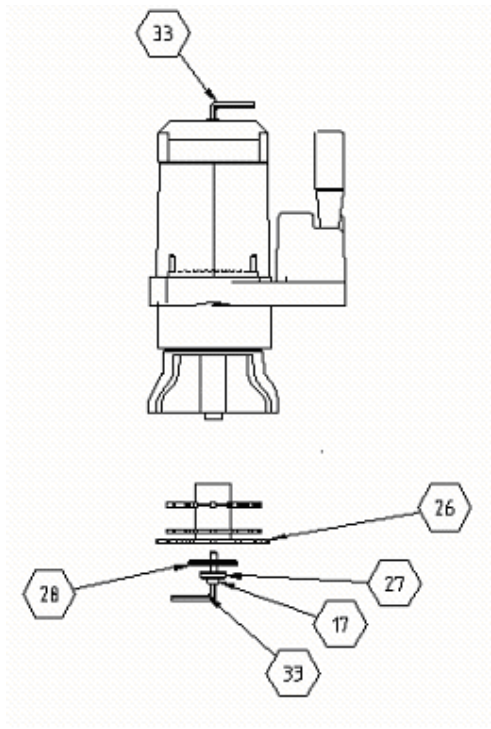


Figure-6

9. MAINTENANCE

9.1. PERIODIC CHECKS

9.1.1 Unplug the machine.

9.1.2 Remove all burr and foreign materials from the machine. If it is necessary to clean the inside of the protection cover, lift and clean it wearing protective gloves because of the cutters. Use protective eye glasses.



9.1.3 Clean and dry the machine table.

9.1.4 Apply a protective oil film onto the milling cutters and the unpainted parts of the machine to provide protection against corrosion.

10. INFORMATION ABOUT FAULTY USE

10.1.1 Check the plug for power supply.

10.1.2 Keep the Start button pressed until the end milling operation is completed.

10.1.3 This machine is used for end milling operations on PVC and aluminum mullion profiles in order to achieve <T> connection of profiles.

11. ELECTRIC COMPONENTS

ORDER NO.	PART NAME	QUANTITY
550-028	1.1 kW 230V ELECTRIC MOTOR	1
162-003	CAPACITOR 25 MF 250V	1
164-015	3x1 PRINTED PLUG	1
165-009	PUSH BUTTON	1