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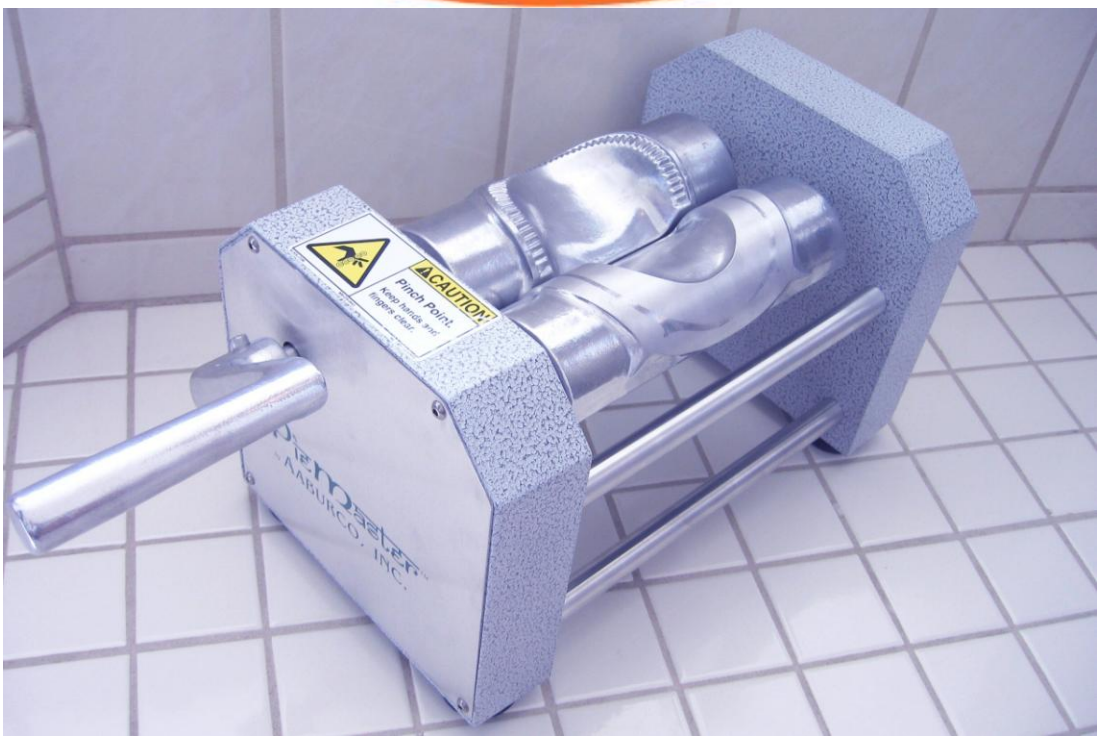

MT-20 MANUAL TURNOVER MACHINE

Operation, Service and Parts Manual

(Revision 050305)

EMILIMITI LLC

Model MT-20, MANUAL TURNOVER MACHINE
(Operations, Service and Parts Manual)

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To: ***Our Valued Customers***

From: ***EMILIOMITI LLC***

Congratulations! You have just purchased a high quality appliance that will give you many years of dependable service. With proper maintenance, your MT-20 Turnover Machine will operate trouble free.

The simple instructions and illustrations contained in this hand book answer all questions relative to installation, maintenance and operation. Please follow them carefully.

Thank you for your patronage.

INTRODUCTION

A turnover is a food product consisting of filling sealed inside dough and then cooked by baking, frying, or boiling. A turnover can be an appetizer, a main course, or a dessert, depending on its size and its contents. Fried fruit pies, calzones, empanadas, pierogies, pasties, strombolis, Texas meat pies, etc. are all turnovers.

The MT-20 Manual turnover Machine takes all the work out of making turnovers. It folds, crimps and seals the dough around the filling in one operation, enabling you to make about five turnovers every minute. Turnovers may be baked fried, or boiled immediately, or they may be frozen raw, and cooked fresh as needed.

The size and shape of the turnover depends on the particular set of molds installed on the MT-20. The MT-20 comes equipped with one set of molds of choice. Other molds can be ordered as needed. All are interchangeable on the MT-20 frame.

SPECIFICATIONS

Dimensions:

Weight, net	21.5 lbs, 9.75 kg
Weight, shipping	24.0 lbs, 10.88 kg
Carton Length	20.0 in, 50.8 cm
Carton Depth	12.0 in, 30.4 cm
Carton Height	12.0 in, 30.4 cm

Packaged:

One box contains one MT-20, a crank handle, a spare parts bag containing a 3/16" hex key and a 1/8" hex key. Also in the box, pre-installed on the Model MT-20 is a customer-selected moldset. Depending on the number of extra mold sets ordered, the box may also contain additional mold sets.

MOLD GUIDE

Mold Material: Food Grade Aluminum
Body Materials: Food Grade Aluminum and Stainless Steel
Mold Sets: Sold in sets of two molds, the Crimper and the Backroll.

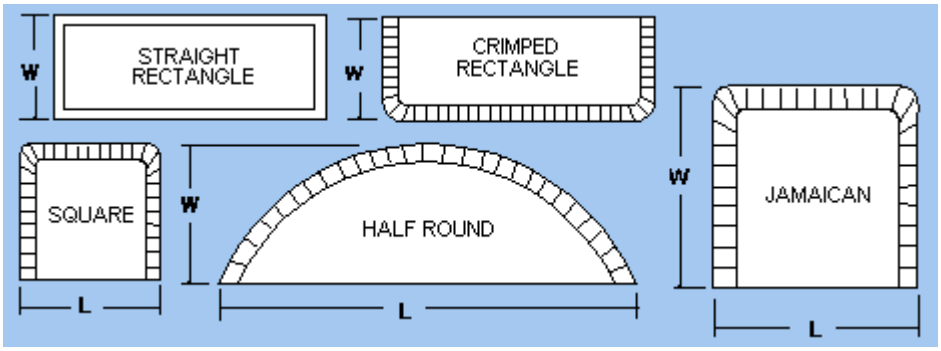
Mold Selection Guide For Models MT-20, MT-20E AND SA-21
(26 Standard Mold Sizes - Contact Factory for Custom Mold Sizes)

PART#	MOLDSIZE	Capacity *		Length		Width		Depth	
		oz	gm.	in.	mm	in.	mm.	in.	mm.
21T719	1/2 Half Rnd Dbl	0.5	14	2-3/8	60.3	1-1/2	38.1	0-5/8	15.9
21T702	1 Double Square	1	14	2	50.8	2	50.8	0-5/8	15.9
21T701	1 Half Round	1	28	3-5/8	92.1	2	50.8	1-1/8	31.7
21T728	1+ Half Round	1.2	42	3-7/8	100	2	50.8	0-1/2	12.7
21T732	1.2 Half Rnd Dbl	1.2	40	2-3/4	60.8	2	50.8	0-1/2	12.7
21T705	2 Double Square	2	57	2	50.8	2	50.8	1	25.4
21T703	2 Half Round	2	57	4	101.6	3	76.2	1-1/2	38.1
21T704	2 Rectangular	2	57	4-5/8	117.5	2	50.8	0-3/4	19.9
21T706	3 Half Round	3	85	4-1/2	114.3	3	76.2	1-1/2	38.1
21T718	3 McD Rectangle	3	85	4-5/8	117.5	2	50.8	1	25.4
21T707	3.5 Crimp Rect.	3.5	95	5-3/8	136.5	2-1/2	63.5	0-1/2	12.2
21T726	4 Hlf Rnd Brks-JP	4	113	4-1/2	114.3	3-1/2	88.9	1-1/4	31.8
21T727	4 Half Rnd Wide	4	113	5-1/16	129	3-1/2	88.9	1-3/8	34.9
21T708	4 Half Round	4	113	4-5/8	117.5	3-1/4	82.5	1-3/8	34.9
21T710	5 Jamaican	5	141	4-1/2	114.3	4	101.6	0-7/8	19.9
21T709	5 Half Round	5	141	4-7/8	123.8	3-1/4	82.5	1-5/8	41.3
21T729	5.5 Empanada	5.5	155	5-1/4	133.4	3.34	95.3	1-1/4	31.8
21T712	6 Half Round	6	170	5	128.0	3-5/8	92.1	1-3/4	44.4
21T730	6.5 Wave	6.5	182	6-1/4	158.8	3-1/2	88.9	0-5/8	15.9
21T713	7 Half Round	7	198	5-9/16	141.3	3-1/4	82.5	1-3/4	44.4
21T714	8 Half Round	8	227	5-1/2	139.7	3-3/4	95.2	2-3/8	60.3
21T722	8 Crimp Rect.	8	227	7-1/2	190.5	3-1/8	79.4	1-3/4	44.4
21T715	9 Half Round	9	255	6-7/16	163.5	3-1/2	88.9	2	50.8
21T716	11 Half Round	11	311	7-1/8	181.0	3-1/4	87.5	2-1/4	57.2
21T717	14 Half Round	14	397	6-7/8	174.6	3-3/4	95.2	2-1/2	63.5
21T725	16 Half Round	16	482	8	203.2	3-3/4	95.2	2-1/2	63.5

Note: Capacity figures are approximate and normal maximums (filling & dough) before cooking. Dimensions include the width of the teeth. It is normal for the molded product to be slightly smaller than the mold size. Be sure to allow about 15% for size shrinkage after

molding. Except when using #21T725 (#16 HR). The product from this mold size tends to grow slightly and produces a 9” (229 mm) length with pizza dough.

Mold Shapes as offered on the Mold Guide;



UNPACKING AND ASSEMBLY OF THE MT-20

The MT-20 is shipped in a single container. It is pre-assembled with the molds you selected, except for the crank handle. The handle is packaged within the carton containing the MT-20 machine. To set up your machine do the following:

1. Install the handle.

Lift the MT-20 main frame from its shipping container. Be sure to find the plastic bag containing the handle, handle screw (attached to the handle) and hex key. Align the screw hole on the handle with the drilled hole on the shaft which extends from one side of the main frame. Place the handle on the shaft at the 2:00 position. Using the hex key, carefully turn the socket head screw until it is fully seated into the handle, and the screw extends through the drive shaft. Tighten the screw firmly, but do not over-tighten. Be careful not to strip the threads in the crankshaft. Save the hex key for future use.

2. Install the molds (if not pre-assembled by the factory).

If your machine arrived with the molds packaged on the bottom of the box, or if you bought multiple mold sets, follow this procedure when changing or installing a moldset.

Place the machine on the table so that the handle is on your right. Rotate the shafts so that the counter-sunk holes in the mold shafts are facing up. Pick up the crimper mold. Notice that one side does not have a crimped edge. Turn the mold upside down on your hand so that the crimp-less edge is toward your wrist. Lift the mold up so that the grooves fit onto the shaft. Align the shaft holes with the threaded holes in the mold. Insert a screw into the hole on each side and tighten with the 3/16" hex key provided.

Now, pick up the smooth, back-roll mold. Notice that one edge is curved. Place the mold upside down in the palm of your hand so that the curved edge is toward your wrist. Lift up the mold so that the shaft fits into the grooves in the mold and the screw holes line up. Insert the screws into the holes and tighten with the 3/16" hex key.

3. Clean The Machine Prior To First Use

Wipe off the entire machine and the molds with a soapy sponge. Rinse with a sponge (wrung out) of clear water, and towel dry. To get rid of any remaining dark residue, wipe the MOLDS down with an old piece of dough, especially in the crimp areas. The dough will pick up any remaining dirt. DO NOT HOSE DOWN OR IMMERSE

OPERATION OF THE TURNOVER MACHINE

1. Place the cleaned turnover machine on your worktable with its handle on the right side.

2. It is a good idea to put a damp towel or rubber mat under the turnover machine to prevent it from moving around the table. If the machine still moves on the table, you can use a "C" clamp to hold it to the edge of the table. The rubber suction cups on the machine may need to be wiped clean if they are slipping. Use a flat knife to help release the suction cups if needed.

3. Prepare the dough peels: Have the portioned dough rolled out to the right size to cover the molds. If you do not have a dough roller, check out the pastabiz.com website for our manual dough roller tools. The website can be found at:

   http://www.pastabiz.com

4. Prepare the filling: Find an ice cream scoop or spoon or cup measure that holds exactly the right amount of filling for the size turnovers you are making. This may take some "trial and error". If the filling contains several ingredients stir them together to form a homogeneous mixture.

5. Rotate the handle of the MT-20 clockwise so that the crimped roll is facing upwards.

6. Lightly dust the molds with flour. After a short time it may not be necessary to use flour as the molds will "season" over time.

7. Place the prepared dough peel on top of the open molds. Turn the handle clockwise *slightly* to start folding and crimping the dough. The molds will begin to roll up on to each other forming a "dough pocket".

8. Place a measured amount of filling into the open pocket formed by the dough lying on the molds. Add any special whole ingredients at this time, e.g.: a slice of cheese, a sausage link, etc.

9. Turn the handle clockwise to fold, crimp, and seal the filling inside the dough. The excess dough is automatically trimmed off.

10. Catch the crimped product in your hand and place on a pan for baking, frying, boiling, or freezing.

SPECIAL TIPS

1. If the crimp does not make a tight seal, perhaps the dough is slightly dry. Try spraying a little water in the crimp area before turning the handle to form the turnover.

   In some cases, brushing a little egg mixed with water in the crimp area forms a very tight seal. Sometimes the seal is not tight because some of the filling is getting into the crimp area. In this case, reduce the amount of filling so it doesn't squeeze up into the crimp.

   Unevenly rolled dough can prevent a tight seal. This happens when a rolling pin feathers out the dough edge. The dough needs to be at least 1/16" thick in the dough crimping area. Our manual dough roller is designed to solve this problem by rolling the dough to a constant thickness.

2. Brushing the raw turnover with egg mixed with milk helps it to brown evenly.

3. Be sure to cook or freeze the product immediately.

4. Don't be afraid to experiment with your recipe to help the machine produce just the product you want. It takes time and practice to know just how much flour to put on the molds, whether to add water to the sealing area, and just how much filling to put into the turnover.

5. It is a good idea to pre-dock your dough, or make cuts in the dough after the turnover is formed to allow steam to escape during cooking.

6. Let the cooked turnovers cool to room temperature and then refrigerate or freeze immediately.

CLEANING THE MT-20

1. Wipe away any dried filling or dough with a damp, clean sponge. Dust the entire machine down with a dry pastry brush and then wipe it clean with a dry towel.

2. DO NOT IMMERSE the machine to clean it. A brush can be used to clean the molds. Hosing-down or immersing the turnover machine will void the warranty.

CHANGING MOLD SIZES ON THE MT-20

1. Rotate the handle so that the crimp edges are facing down, and the backs of the molds are up showing the screws which hold them onto the shafts.

2. Notice the positions of the crimper mold and the backroll mold. The new molds must be installed in the same positions. Use the large (3/16") hex key to loosen the screws and remove the molds. Pick up the crimped mold that is to be used now, and screw it into position. Screw on the back roll to be used. Tighten securely and rotate the handle a few times to make sure the action of the molds is accurate. See INSTALLING THE MOLDS on p.4 of this manual for more complete instructions, if needed.

3. Dust the molds with flour, if needed, and begin operations.

TROUBLE SHOOTING

1. MOLDS SLIP (Gears are loose).

Turn the machine so that the handle is on the right. Take off the left side cover. Use a 1/8" long arm hex key to loosen the set screws on the rearmost gear. Grab the molds, one in each hand. Rotate them both so that the front edge of the crimper roll is even with the front edge of the back roll. If it is difficult to rotate the mold with loosened set screws, it may be necessary to loosen them more and rock the molds back and forth to allow rotation of the loosened gear. Tighten the set screws on both gears. The set screws on the front and rear gears are located on the boss of the gear. Replace the side cover to complete the adjustments.

2. MACHINE MOVES WHILE OPERATOR IS TRYING TO MAKE THE TURNOVER.

See the OPERATION Section, p.6, #2.

3. DOUGH STICKS TO MOLDS

a. Use more flour to dust the molds before putting on the dough peels.
b. Be sure the dough is kept cool.

4. CRIMP IS NOT TIGHT (TURNOVERS LEAK)

a. Dough may be too dry. Use water or egg wash in crimp area before forming the turnover.
b. Dough is too thin in crimp area. Watch to be sure the dough peels are of uniform thickness.
c. There is too much filling in the turnover. Reduce the amount.
d. Cooking gases (usually steam) have built up inside the turnover. Use docked dough or cut vents in the dough before cooking.
e. Spring tension is out of adjustment. To adjust the spring tension: Take side covers off both sides of the machine. The molds should be rotated until they are about 1/2 way around. View the screw on the "swing arm". (It is a horizontal screw that goes through the arm that is connected to the spring on each side)
    1) Make sure that the molds are straining the springs when you check the adjustment screw.

2) Loosen the lock nut on the swing arm on each side of the turnover machine. Adjust the tension screw so there is about 1/16" between the end of the screw and the stop post. (About the thickness of a penny) Do this with both swing arms.
3) Tighten the locknut making sure the screw doesn't move.
4) Again, rotate the molds onto each other and check to make sure there is a small air gap between the screw and the stop post at all times while the molds are in contact each other. If there is no gap, repeat steps 2 - 4, increasing the gap.
5) Replace the side covers.

5. EXCESS DOUGH NOT COMPLETELY TRIMMED OFF.

The spring tension is out of adjustment. (See 4.e. above)

Model MT-20 Parts List

PM-MT20 Manual Turnover Machine

PART NO.	DESCRIPTION	QTY PER ASSEMBLY	U/M
20T100	MT20 TOPY ASSY DWG & PRODUCT NO.	1	EA
20T101A	END CASTING, LEFT, MACHINED	1	EA
20T102A	END CASTING, RIGHT, MACHINED	1	EA
20T103	SWING ARM, MACHINED AND ASSEMBLED	2	EA
21Z193	BUSHING 5/8"ID X 1.125 LONG WWG 1X868	4	EA
21Z195	SCREW, 1/4-20 X 1-1/2" HEX HD CAP -GRD G3	2	EA
21Z131	NUT, 1/4-20 HEX PLATED	2	EA
20T104	SPRING, STD STRENGTH, CENTURY 538	2	EA
21T114	GEAR, MACHINED	2	EA
21Z207	SCREW, SET, 1/4-28 X 3/8 LNG SCKT HD	4	EA
20T105	IDLER SHAFT, 5/8"RND SS X 14" LONG	1	EA
20T107	DRIVE SHAFT, 5/8" RND SS X 16-1/2" LONG	1	EA
20T108	SIDE COVER RIGHT SIDE 0.06 ALUM-GRAINED	1	EA
20T109	SIDE COVER LEFT SIDE 0.06 -ALUM-GRAINED	1	EA
21Z168	SCREW, 10-32 X 1/2 HEX HD CAP, SS	12	EA
20T110	CRANK HANDLE MACHINED	1	EA
21Z159	SCREW, 1/4-20 X 7/8" SCKT HD CAP, SS	1	EA
21Z208	HEX KEY, SHORT HANDLE, 3/16"	1	EA
20T111	SHAFT COLLAR, ST PLTD, 5/8" ID W/ SET SCREW	2	EA
21Z102	HEX KEY, SHORT HANDLE, 1/8"	1	EA
20T113	FRAME ROD, 3/4 RND X 11" 6061-T6 ALUM	3	EA
21Z201	SCREW, 3/8" X 16 X 1-1/4" SCKT HD CAP	6	EA
21Z194	WASHER, AN960C1016 LOCKWASHER	2	EA
21Z203	WASHER, LOCK, INTERNAL STAR, 3/8 ID	4	EA
	WASHER, HIGH COLLAR LOCKING, 3/8"	2	EA
21Z206	FEET, SUCTION CUPS, 1.5"DIA W 8-32 SCREW	4	EA
	INSTRUCTIONS MANUAL W/ WARRANTY CARD	1	EA

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TECHNICAL BULLETIN

Adjustable Stops (PAS) for Model MT-20

If you have purchased a Model MT-20 with a mold set size of 6 ounces or smaller, your MT-20 will have two cam blocks (PAS) included on your machine.

These special PAS cams provide a way to control where the molds stop when trying to produce the maximum size turnover from ½ to 6 oz mold sets. Some mold sets have mold stops pre-set at the factory. These may be changed as described below.

When to Use the PAS Cams: Whenever you are unsatisfied with the normal resting position of the mold set, and you want to hold them open a little wider to make dough insertion easier, or to make the turnover a little larger.

The PAS cam set provides a bumping stop point that can be used to stop the handle rotation before the molds come together. This allows consistent production of larger size turnovers from the same mold set.

The drawing provides adjustment details. The PAS cams are located inside the end cover (on the handle side) of the machine. To access them, remove the crank handle, remove the 4 screws in the end cover and remove the end cover. Set the PAS cams by following instructions on the drawing. When you are finished, replace the end cover and handle.

The PAS cams are disabled when the machine is shipped except on small moldset machines, unless you request that a position be preset on the machine prior to shipment. (See Figure A on Drawing 20T600.)

If you have questions please call our Technical Service Department at 530.273.9353 between the hours of 8:00am and 4:00pm Pacific Time.

Technical Services Department
EMILIOMITI LLC