

FMC CORPORATION  
Canning Machinery Division  
Hoopeston, Illinois

Bulletin 1

Super Pulper and Finisher #50 and #100 Models

Installation

When machine is ready to install, it should be carefully uncrated and thoroughly cleaned inside and out, being sure there is no foreign matter left in the machine. Check all bolts and nuts, especially adjusting nuts on blades or brushes and see that they are all tight.

Install machine on a solid floor or foundation securely fastening it down. If floor is uneven it will be necessary that some of the feet be shimmed to avoid springing of frame when anchor bolts are tightened.

Thoroughly grease machine before starting.

Drives and Speeds

Model #50 The recommended speed of this machine is about 750 to 775 RPM. It is equipped with  $3\frac{1}{4}$ " face by 12" diameter pulleys. A heavy 3" belt in good condition should be used. When machine is used as a finisher, it requires about  $7\frac{1}{2}$  H.P. and about 10 H.P. when used as a pulper.

Model #100 The recommended speed of this model is about 675 to 700 RPM. It is equipped with pulleys with  $5\frac{1}{2}$ " face by 12" diameter. It is recommended that a good grade of 5" belting be used. When machine is used as a finisher and worked to capacity it requires about 15 H.P., and about 20 H.P. when used as a pulper.

Screens

The product being run and the results desired will determine what size screen will be required. The amount of pomace strained out of the product is controlled by the size of the perforation in the screen. For example, for chili sauce where it is desired to pass seeds and some chunks into finished product, screens with  $1/4$ " perforations are usually installed.

The following screenology table gives standard perforations for various products for both pulper and finisher.

Product	Screen Size for Pulper	Screen Size for Finisher
Tomato Pulp	.060	.027 or .033
Catsup	.060	.027 or .033
Soup	.060	.027 or .033
Pumpkin	.125	.045 or .060
Squash	.125	.045 or .060
Apple Butter	.045	.033
Apple Sauce	.125	Not Finished
Peach Butter	.060	.045
Plum Butter	.060	.045
Prunes	.125	.060
Apricot Butter	.060	.045
Jellies	.045	.027 or .033
Jams	.060	.045
Salad Dressing		.023 or .027
Mayonnaise		.023
Honey		.060
Pie Filling	.045	.027 or .033
Chili Sauce	$\frac{1}{4}$ "	Not Finished

Changing Screens

Open top cover and throw back. Go to discharge end of machine and loosen several turns two Allen Head set screws in each collar on main shaft each side of Timken bearing.

Do not loosen cap screws holding bearing to end plate. Next, remove four thumb screws that hold end plate to frame and two large hand wheel studs on each side which hold end plate to side frames. The end plate with bearing may now be removed by pulling it out towards discharge end.

To install screen, reverse above. Be sure that screen enters grooves in head casting.

Distribution Plate

The plate located just ahead of beater blades, back of feed hopper, acts as a distributor and prevents product from feeding directly into center of pulping chamber. This plate is set at factory for average conditions.

When a product is being run such as whole, cold tomatoes, it may be necessary to adjust plate by moving it farther away from feed end of machine. This will permit tomatoes to enter pulping chamber faster.

When adjustment is made, be sure to tighten set screws firmly.

Beater Blades

When installing beater blades, care should be exercised as blades are not all the same weight. The weight is stamped on the pad, on

the back of each blade. The blades of the same weight are balanced to each other and must be installed opposite each other on arms. If installed otherwise they will cause vibration. These blades, when ordered, should be ordered in pairs to make sure you have two of equal weight.

#### Adjustment

Beater blades should be adjusted so there is about 1/8" space between outside edge of blades and screen when blade is at bottom which is the closest point. An easy way to make this adjustment is to secure a piece of 1/8" flat stock, 3/4" wide by 2" long and lay it on screen at bottom, opposite beater arm where adjustment is being made. Repeat this operation until all blades are adjusted equally on both ends. The angle at which blades are set in relation to center line of machine will be determined by what results are desired. The greater the angle, the faster the material is moved lengthwise along screen and the more moist the pomace will be. When the angle of blades is more parallel to the center of the machine, the slower the material will move and the dryer the pomace will be.

#### Discharge Gate

The gate has a spring tension adjustment and will also control the pomace discharge. When tension is tight the pomace will be held back and be discharged dryer than if tension is light.

#### Steam Connection

The pulping operation can be speeded up somewhat and the capacity increased by connecting a steam pipe into lower part of feed end through 3/4" pipe tapped hole. Some customers claim a better color is secured by use of steam in pulper hopper.

#### Lubrication

Machine should be thoroughly greased morning, noon and evening. Use a good grade of #1 grease such as Shell #5144 or its equivalent. After machine has been steamed down, care should be exercised to see that bearings have sufficient lubrication.

When motor equipped, follow instructions furnished by motor manufacturer as to proper lubrication of motor unit.

#### Care and Cleaning

Pulper or finisher should be checked carefully at least once each day to be sure all bolts, nuts and screws are tight. This is particularly true of the motor drive units for if the motor should get out of line there will be excess vibration. A little attention given machine each day may save much time and expense at some future time. When run is completed, wash down with hot water and steam.

FOOD MACHINERY AND CHEMICAL CORPORATION  
Canning Machinery Division  
Hoopeston, Illinois

Pulper Parts List

#100

<u>Part No.</u>	<u>Description</u>
JE-4 ✓	Screen Frame End Ring
*JE-5	Screen Cover Frame
JE-6	Feed End Head - Lower Section
— JE-7 — 55	Pulper Feed End Head - Upper Section
JE-9-A	Distributor
<del>JE-10-P</del> JE 519	Beater Blades
JE-11-D	Beater Arm
JE-13	Packing Gland - Feed End Head
JE-21-A	Lower Cross Member - Feed End
JE-22-R	Side Frame R.H.
JE-22-L	Side Frame L.H.
JE-25-R	Collecting Pan Cover End (2)
JE-25-L	Collecting Pan Cover End (2)
JE-28	Finisher Brush Holder - Feed End
JE-29	Finisher Brush Holder - Discharge End
JE-30	Frame Cross Member and Bearing Bracket
JE-33	Discharge End Head
JE-34	Rear Bearing Sealing Collar
JE-35	Refuse Discharge Gateway
— JE-36 — 44	Finisher Feed End Head - Upper Section —
JE-43	Tight Pulley
JE-43-A	Loose Pulley
JE-44	Outer Bearing Bracket
JE-45	Outer Bearing Bracket
JE-46	Belt Shifter
JE-72	Screen Frame Side Bar
JE-73	Screen Frame Side Bar
- JE-300-	Pulper Screen
- JE-301-	Finisher Screen
*JE-302	Screen Cover Sheet
JE-303	Collecting Pan for Finished Product
JE-305-A	Pulper Feed Hopper
JE-306	Beater Arm Stud Washer
JE-307-B	Beater Arm Stud
JE-311	Refuse Gate Adjusting Screw
JE-317	Refuse Gate Spring Holder
JE-319	Collecting Pan Side Angle
JE-328	Outer Bearing Support
JE-330	Collecting Pan Cover Side Angle
JE-331-Z	Collecting Pan Cover (Assembly)
JE-332-Z	Discharge End Head Lockwheel Assembly
JE-334	Finisher Brush
JE-335-A	Dodge - Timkin Pillow Block
JE-336-Z	Refuse Discharge Gate (Assembly)
JE-339-A	Main Shaft
JE-339-B	Drive Shaft
JE-341	Refuse Gate Hinge Pin
JE-343	Shouldered Thumb Screw
* JE-3023	SCREEN COVER ASSY. T-316 ONLY

assy JE-390Z

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<u>Part No.</u>	<u>Description</u>
JE-344	Hex Nuts for Beater Arm Studs
JE-345	Belt Shifter Handle
JE-346	Guide for Belt Shifter
JE-347	Guide for JE-346
JE-348	Shim under JE-347
JE-349	Belt Shifter Bar
JE-351	Stud for Packing Gland
JE-379	Shim under Pillow Block
JE-379-A	Shim under Dodge Pillow Block
JE-403	Butt Hinges
JE-421	Gasket
JH-27	— Screen Cover Clamp Nut —
JH-57	Collecting Pan Outlet Flange 5"
JH-333	Screen Cover Clamp Bolt
JH-334	Screen Cover Clamp Bolt Pin
JH-335	Screen Cover Hinge Pin
JH-426	Refuse Gate Tension Spring

## Parts for 20 H.P. U.S. Motor

JE-17-B	Pulper Shaft Coupling
JE-17-F	Motor Shaft Coupling
JE-38	Leg for Motor Support
JE-78-R	Motor Support Bracket R.H.
JE-78-L	Motor Support Bracket L.H.
JE-321	Block for coupling
JE-335-A	Dodge-Timken Pillow Block Type E
JE-340-A	Main Shaft
JE-379	Shims under Dodge-Timken Pillow Block
JE-379-A	Shims under Dodge-Timken Pillow Block

20 H.P. U.S. Syncrogear Motor, 220/440 volt,  
60 cycle, 3 phase, output speed 690 RPM,  
Frame #364-50, Type GH splashproof.

## Pulper Pulley Drive

JE-43	Drive Pulley
JE-43-A	Loose Pulley
JE-44	Outer Bearing Bracket R.H.
JE-45	Outer Bearing Bracket L.H.
JE-46	Belt Shifter
JE-328	Outer Bearing Support
JE-335-A	Dodge Timken Pillow Blocks Type "E"
JE-339-A	Main Shaft
JE-345	Belt Shifter Handle
JE-346	Guide for Belt Shifter
JE-347	Guide for JE-346
JE-348	Shim for JE-347
JE-349	Belt Shifter Rod
JE-379	Shim under Dodge-Timken Pillow Blocks
JE-379-A	Shim under Dodge-Timken Pillow Blocks

8 - 1/4" - 20 x 1/2" Long STN. STL.  
 FLAT HEAD MACH. SCREWS (HEAD = .445" DIAM.)  
 (HOLD SCREENS DOWN TO CSTR.)

101-3-7

100 FRT.  
 JE-334-  
 Rm Bus

