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60-FRAME EXTRACTOR

M00430 - SEGMENTED REEL

M00450 - SMOOTH REEL

ASSEMBLY

OPERATION

MAINTENANCE

REPLACEMENT PARTS

The Dadant Radials are constructed of food-approved, gleaming stainless steel. These automatically advancing extractors come equipped with a newly designed speed control unit which can be set to automatically increase extracting speed over a fixed period of time or can be operated manually. If the honey is fresh, light, and warm, it requires less time to extract and a faster cycle time can be set. If the honey is cold and heavy, the speed control is easily adjusted for a longer cycle of extracting time. Stop switch allows the machine to be stopped at will. All moving parts are enclosed for safety. Top channel and cover system designed to keep dirt and water out of the extractor. Extremely quiet, easy-to-run with the built-in brain. Ready to plug in and extract.

60-FRAME RADIAL EXTRACTOR

Satin Finish Stainless Steel Construction
20-gauge 304 stainless steel all-welded construction provides years of service while maintaining excellent appearance with no rust, chipping or flaking.

Manual Hand Brake
Hand brake provides a positive means of slowing and stopping reel rotation

3” Stainless Steel Bottom Drain
Very large outlet virtually eliminates clogs and lets honey flow freely from extractor. Located at the outer edge of the tank and approximately 7 inches off the floor for easy fitting hook-ups and excellent honey drainage.

Cone-Shaped Bottom
Cone bottom provides excellent honey drainage and easy maintenance while supporting the heavy duty bottom ball bearing above honey levels.

Stainless Steel Legs
Legs are a structural part of the tank, made to be bolted to the floor. Two legs are adjustable for proper leveling and honey drainage.

Fully Automatic Speed Control and DC Motor
Two modes of operation (manual and automatic). Manual control from 0-275 reel RPM’s. Adjustable automatic time cycle (select extracting time from 10 to 30 minutes). Automatically advances the reel speed over the time period you select.

Hinged Top Lids
Stainless steel lids are continuously hinged and attached to machine for smooth lid operation providing more than sufficient loading room from either side of extractor.

Radial Constructed Reel
Combs are efficiently extracted from both sides at the same time. 60-Frame Extractor available in segmented or smooth reel. Smooth reels will hold up to 50% more frames depending upon loading technique.

Engineered Bottom Support
Bottom support engineered like a “bridge” for maximum strength and stability—the more weight put on the cone-shaped bottom, the stronger “bridge” becomes.

Dadant

Installation

The Dadant Radial Extractors come completely assembled, ready to be uncrated, rinsed with hot water and put to work. For proper operation, the extractor must be securely attached to the floor by all hold downs—at least 2 bolts per leg foot. Be sure all four feet sit on the floor (no extractor rocking) before securing the extractor to the floor. If your floor is uneven it may be necessary to "shim" under the short leg.

Operation

The concept of the radial has saved more time and more combs for beekeepers than any other invention to reach the industry. Radial extractors are the quickest, easiest, and most efficient way to extract honey from the comb. Uncapped combs are placed in the circular reel like spokes of a wheel. The reel spins, creating a centrifugal force and because of the natural upward slant of the honeycomb cells, honey is thrown from both sides of the comb at once. No further handling of the frames is needed from starting to unloading time, freeing the operator for other work such as uncapping combs for the next load. With radial extractors, the outward pressure is against the top bar, not against the comb surface as in small, non-radial models, eliminating much of the breakage of the comb.

Dadant is pleased to provide you with the latest in electronic speed controls. The control on your extractor is the product of over three years of development and testing and is designed for only one purpose—controlling honey extractors. Please read all remaining instructions carefully before using the control.

Maintenance

1. The V-belt may require adjustment or replacement. To adjust, remove the motor drive cover and loosen or tighten the 420-34 Tension Adjustor. To replace, loosen tension adjustor and slip belt off motor pulley and 5-114 pulley.
2. The top and bottom bearings will require lubrication annually. Always use a food-approved grease available through your Dadant & Sons, Inc., supply outlet.
3. The speed control is sealed; however, use caution to avoid excessive moisture on the control and motor when cleaning the extractor after use. If you should experience any operating problem with the control unit, do not try to repair the control unit yourself. Call your nearest Dadant branch or the Hamilton home office. The operation of the control can be changed to match varying extracting conditions. See Speed Control section for these instructions.
4. Keep the extractor clean between uses. Wash with hot water, rinse and dry thoroughly.

Familiarization with the Controls

Power Switch (1) - The power switch is located on the left side of the control and has a built-in circuit breaker to protect your control. This switch is used primarily at the beginning and ending of the day.

Visual Display (2) - The visual display lets the operator see how the control is functioning. The display is actually 10 individual lights. When the control is operating on automatic, the farthest left light flashes and a second—steady on—light tells the operator visually how far the control is through its automatic cycle. This second light "marches" across the display from left to right as the control progresses through its automatic cycle. When the automatic cycle is complete, the "marching" light returns to original position and stays lit and the flashing light goes off. When being operated on manual, the farthest light to the right is a steady "on." By watching the display and changing from automatic to Manual, you'll quickly understand how the visual display operates.

Rotary Dial (3) - The rotary dial is used in both the automatic and manual operation. When operating the control on automatic, read the outside printed ring to set the total time you desire your extractor to run. A 5 minute (full clockwise rotation) to a 30 minute (full counterclockwise rotation) cycle can be obtained.

When operating the control on manual, the rotary dial becomes a speed control, and the extractor will run continually at the percent of speed the operator desires (read inner printed ring 0% to 100% speed). Caution: Before pushing the manual switch, be sure the rotary dial is set where you want it.

Operation Control Center (4,5,6) - It consists of 3 switches: Auto Start (4), Manual Start (5), and Stop (6). To operate the control on automatic, press "auto start." To operate the control on manual and adjust the speed with the rotary dial, press "manual start." To stop the control at any time, press "stop."

Using the Speed Control

The potentiometer (right hand rotary dial) is used for both manual and automatic operations of the control. The minutes for the automatic side of the control are on the outer labeling ring (5 minutes full clockwise, 30 minutes full counterclockwise). On manual, the percent of speed is from the very slowest (0% - full stop) full counterclockwise to maximum speed (100%) full clockwise.
The on/off switch (circuit breaker included) is mounted in the control left side panel.

A. Power Source-The control operates only on 110-120 volt A.C. Plug the power cord into an appropriate grounded outlet and connect the yellow twist-lock connector to the connector on the extractor motor. The output of this unit is 0 - 90 volts D.C. and must be used with 0 - 90 volt D.C. motors up to and including 1 H.P.
B. Power Switch-Turn the power switch "on" and note that two lights are lit on the "visual display." This power switch incorporates a circuit breaker to protect the control from current overload. Should this circuit breaker open, merely reset the power on switch to reset the breaker. This switch should be shut off at the end of each extracting day, and the start-stop switches may be used between extractor loads.
C. Operator Control Center-The operator may select manual or automatic operation. To make the selection, press the switch for the operation desired. On automatic (auto start) the light on the left of the visual display will flash. On manual, the light on the right of the visual display lights and stays lit while running on manual.

1. Manual Operation-The reel speed on manual is controlled by the dial on the upper right of the control. For Manual Operation, read the inside labeling. The 0-100 indicates percent of speed. 100% is approximately 280 rpm; therefore, 50% is approximately 140 rpm. To use manual, merely set the speed desired and press manual start. The extractor will advance to the set speed and remain there. This speed may be varied at any time during manual operation by turning the dial.
2. Automatic Operation-Your cycle time may be varied from 5-30 minutes. Automatic operation is obtained by pressing auto start. The time of extractor operation is selected by the operator. To use the automatic cycle, set the complete extracting time desired using the rotary dial. Read the outside scale (5 minutes full clockwise to 30 minutes full counterclockwise) then press auto start. The reel will begin rotating slowly and gradually increase speed until full speed is reached. This occurs at 75% of the set cycle time. The reel continues at full speed for the remainder of the cycle and automatically shuts off. The manual brake may then be used to stop the reel.

Exceptional Versatility

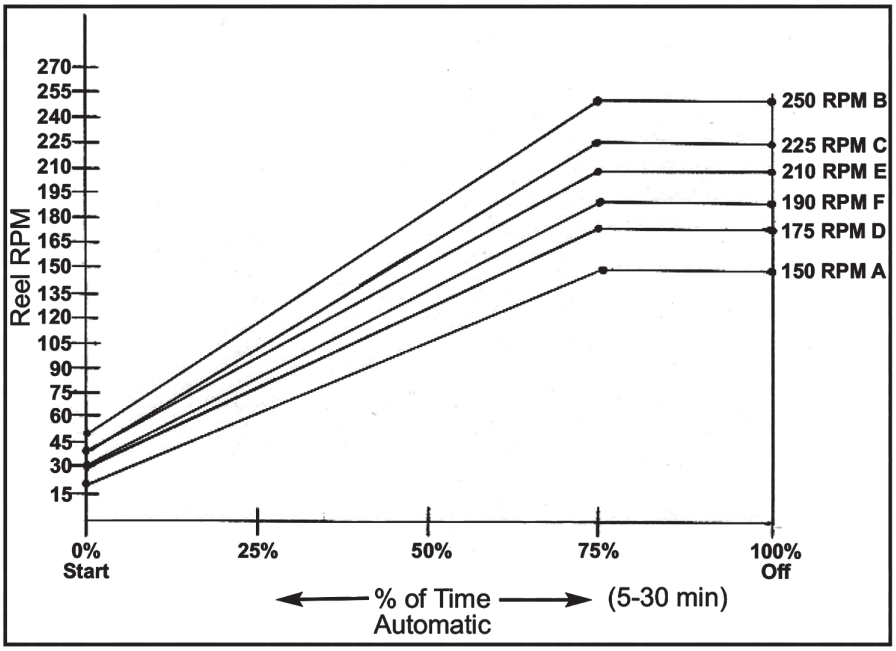
An internal selector switch allows the owner to select a variety of automatic cycles. The extractor can be precisely controlled to allow for a variety of extracting conditions (temperature—moisture level—type of honey—condition of frames). Your control comes preset for "average' operating conditions for your size extractor and will be the proper setting for 80 - 95% of extracting conditions. (This switch should be changed for special conditions only). However, for your particular extracting job, a different operation characteristic may be desired.

To select a different operating characteristic, remove the six phillips head screws holding the cover in place. Be sure the control is unplugged from its Power Source. Lift the bottom edge of the cover up turning it completely upside down as if using the top of the cover as a hinge. In the upper left of the upside down cover, you'll see a small selector switch with a center arrow and screw driver slot. Around the outer edge, the letters A-F and the numbers 0-9 appear. The arrow will be pointing at one of these characters. By referring to the charts below, you may select an operating characteristic just right for your extracting conditions. For assistance, call your local Dadant Branch Manager.

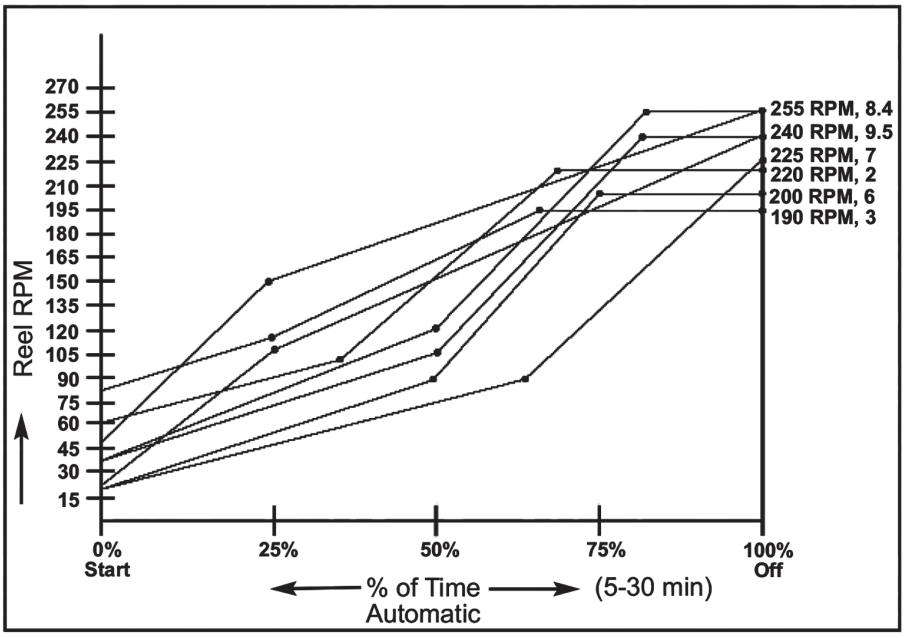
For "average" operation, the selector switch is set on "B" for a 30-frame, on "E" for a 60-frame, and on "D" for a Honey Master. (The larger the extractor, the slower the acceleration and starting and ending speeds).

60-FRAME RADIAL EXTRACTOR

Example 1 —A Honey Master being used to extract colder heavier honey might be “throwing” some combs on a “D” setting. Since slower acceleration is indicated “6” would be a proper selection. An “A” could also be a good choice in order to slow both acceleration and top speed.



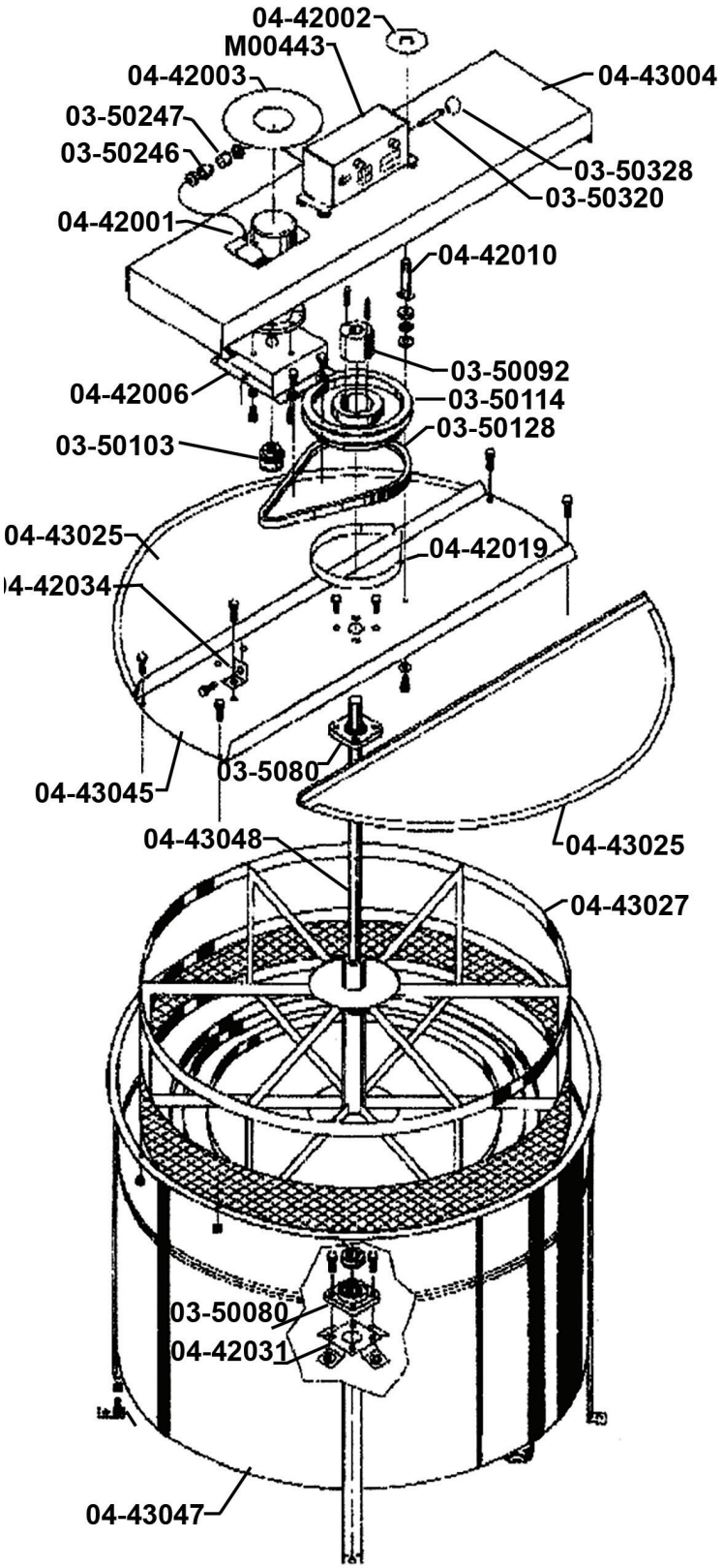
Example 2—A 30-frame extractor being used to extract warm, light honey might be “too slow” extracting or not drying combs sufficiently. An “8” would be a good alternate selection—faster acceleration.



Replacement Parts 60-Frame Radial Extractors

M00430 Segmented Reel M00450 Smooth Reel

Part Number	Description
04-42001	1/2 HP Motor Assembly
04-42002	Brake Cover Washer
04-42003	Motor Cover Washer
04-42004	Belt Guard
04-42006	Motor Mount
04-42010	Brake Post
04-42019	Brake Band w/pin
04-43027	Replacement Reel, Smooth
04-43027	Replacement Reel, Segmented
04-42031 (pre 2000)	Bottom Bearing Support
04-43205 (after 2000)	Bottom Bearing Support
M00443	Electronic Speed Control
04-42034	Tension Adjuster
04-43045	Top Channel
04-43025	Hinged Cover Assembly
04-43047	Replacement Tank
04-43048	Reel Shaft 25''
03-50080	1-3/16" Flanged Bearings Top & Bottom
03-50089	1-3/16" Flanged Bearings (after 2000)
03-50092	1 3/16'' Taperlock Bushing
03-50103	Motor Pulley
03-50114	3-Groove Brake Pulley
03-50128	44'' Belt
03-50246	Male Turnlock Connector
03-50247	Female Turnlock Connector
03-50320	Brake Post Handle
03-50328	Brake Knob



Specifications

Tank Diameter — 52'' (1320.8mm)

Tank Height — 36'' (914.4mm)

Pipe Thread Outlet — 3'' (76.2mm)

Reel Diameter — 48'' (1219.2mm)

Reel Depth — 16'' (406.4mm)

Reel Axis, Shaft Diameter — 1 3/16'' (30.2mm)

½ Horsepower—90 Volt DC Permanent Magnet Motor

Automatic Advancing 0-90 Volt DC Output Speed Control

Plugs Into 120 Volt AC Outlet And Draws 7 Amps Maximum