



## BROWN INTERNATIONAL CORPORATION, LLC

### Model 2503

#### EXTRACTOR FINISHER SEPARATOR



**APPLICATIONS:** The Model 2503 is readily adapted to extracting, finishing, de-watering, and separating with a minimum degradation of solids. Citrus products as well as other diverse materials such as apricots, tomatoes, pears, apples, plums, grapes, and pineapple have the liquids satisfactorily separated from the solids. The Model 2503 provides rigid quality control, easy cleaning and low maintenance.

**OPERATION:** Separation of liquids and solids is accomplished in the Brown Model 2503 by means of a rotating screw within a cylindrical screen. The liquids and controlled amounts of solids pass through the screen. The balance of the solids (pomace) is discharged through a non-rotating air loaded valve. Dryness of the pomace can be accurately controlled by simply varying the air pressure on this valve. Production through-put is dependent on the type of product being processed, screen hole size and open area, rotational speed of the screw and air pressure on the discharge valve.

**CONSTRUCTION:** Types 304 and 17-4 stainless steel are used throughout including frame members. As a result, maintenance is reduced, and product integrity ensured.

**Screw design.** The screw is mounted on double-row self-aligning roller bearings. Bearing surfaces and outside diameter of screw are ground concentrically to insure a uniform close fit to the screen. The flights on the screw are of constant depth and pitch. This flight configuration assures the pressure on the product is controlled by the air loaded valve reducing degradation of solids from abrading against the screen.

**Screens.** Replacement screens are easily installed without removal of the cage. The cage, which provides a sturdy back-up for the screens, is hinged at the top and opens for cleaning by releasing quick acting over center latches. The hinge members are located and doweled to the cage with a built in pre-load which, together with the over center latches, provides a tight seal along the cage edges. Screens are made of a special alloy possessing the stain resistance of stainless steel but with greater resistance to fatigue and cracking. Brown Model 2503 screens provide four or five times the life of stainless steel screens. They come pre-formed with non-perforated flanges and counter-sunk mounting holes. Screens are available in a wide range of hole sizes from .010" to .375" diameters. Standard thin inner screens are backed up for strength by thick screens with 5/8" diameter holes. Thicker screens are available as heavy duty punched or conically drilled configurations.

**Discharge Valve.** The non-rotating discharge valve is air controlled to provide constant pressure with resultant uniform dryness throughout the entire stroke of the valve. The valve is quickly adjusted for desired changes in characteristics of the end product without stopping the machine.

**Drive.** A V-belt drive provides shock protection for the machine, as contrasted with direct-coupled gear motor, should tramp material enter the finisher. A wide range of speeds can be achieved by simply changing the belts and pulleys. Standard drives provide final speeds from 270 rpm. Standard under machine drives provide for mounting of 5 through 30 hp motors. Optional sub-frame mounted drives provide for 20 to 40 hp motors.

## PRINCIPAL ADVANTAGES:

**HIGH CAPACITY:** The unique design of the screw and its close fit to the screen achieves a maximum activity at the screen level, resulting in greater capacity than conventional increasing root diameter screw finishers.

**QUALITY CONTROL:** In a screw press, pressure control is quality control. The constant depth flights of the Model 2503 screw means the pressure is developed only in conjunction with the air loaded valve. This valve is easily controlled by the operator while the machine is in operation.



**SMOOTHER OPERATION:** The Model 2503 operates smoothly and efficiently with a minimum of attention. Plugging is eliminated because of the positive conveying action of the screw.

**EASIER CLEANING:** Designed for fast, thorough cleaning. Screen cages are hinged and open without tools. Lifting heavy cages from the machine is eliminated. With cages in the open position, the interior is readily accessible for cleaning. Screens can be cleaned in place, avoiding damage during removal. All stainless steel welded construction eliminates stagnant pockets and open joints. Strong cleaning solutions may be used.

**MINIMUM MAINTENANCE:** The Model 2503 has been designed to operate continuously with a minimum of down time.

Should a screen become damaged, it can quickly be replaced by unskilled helpers. All screens are pre-fitted for 100% interchangeability. The V-belt drive reduces maintenance by providing a safety factor which protects the machine from damage.

**SPECIFICATIONS:** With standard under machine drive.

Overall length	78-7/8"	Height of liquid outlet	
Overall width	24-3/4"	with bevel seat adapter	12-3/16"
Overall height	46-3/4"	with tri-clamp adapter	11-9/16"
Height of inlet	41-3/8"	Horse power available std. drive	5-30
Size of inlet flange	6" X 12"	Sub-frame mounted drive	20-40
Height of pomace discharge		Recommended RPM	270-500
Bottom	22-3/8"	Weight with 20hp std. drive	approx. 1400 lb.
Height to center of drive shaft	34-9/16"	Weight with out drive	680 lb.
Capacity - input	up to 200gpm	Volume crated for export	67 cu. ft.

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