

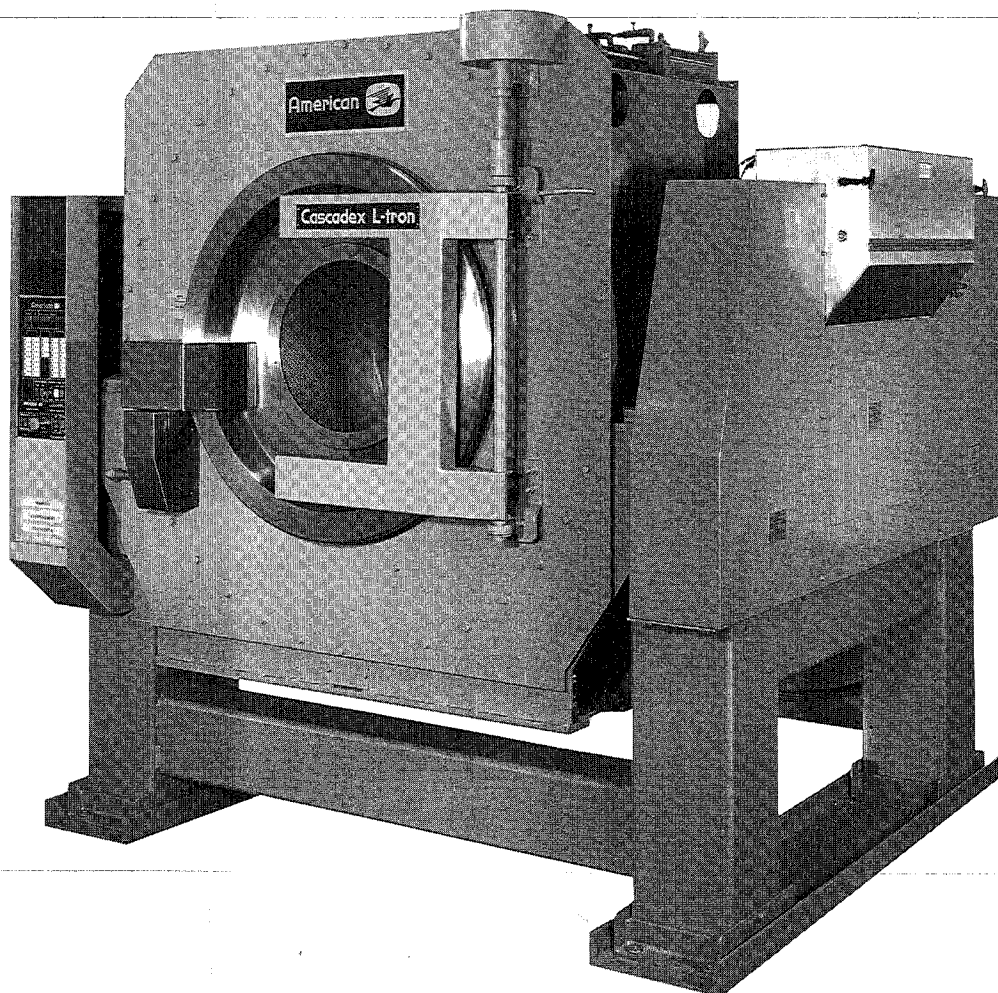
UN - "CONVENTIONAL"

# American's 450-Pound (204 Kg) Cascadex L-tron Washer/ Extractor

A single-motor machine  
with tilting action for easy  
loading and unloading

The L-tron is designed and built as  
a high efficiency, low maintenance  
and versatile performer. Its features  
include:

- Single motor
- Electronic variable frequency drive
- Patented electronic load distribution
- Electronic braking
- Air bags for tilting, vibration isolation
- Patented water and chemical wetdown



## Why One Motor

Multiple motors, clutches, gear boxes, jack shafts can all be found on conventional 450 pound washer/ extractors. Is it really necessary to have two or more motors for the washer/extractor process?

The engineers at American said "no." The L-tron's single motor performs at 92% efficiency while powering *two* wash speeds, load distribution, *two* extract speeds, and cylinder braking.

Power is generated by an "off the shelf" AC motor. There are no brushes to change and speed is much easier to control than with a DC motor. The L-tron AC motor eliminates the potential for DC motor "run away."

Of course fewer moving parts means less can go wrong and fewer parts to replace. You will appreciate the reduced downtime spent on maintenance of gear boxes, clutches, brakes, jack shafts, hydraulic cylinders, hydraulic pumps, spring mounts or shock absorbers – *there aren't any on the L-tron.*

## Electronic variable frequency drive

Since the L-tron washer-extractor is powered by a single motor, only one drive is required. An electronic variable frequency drive was specified because its exceptionally high energy efficiency is close to "unity" with a power factor of approximately 1.

This high power factor translates into reduced operating costs and extended component life.

## Electronic braking

This is done with the variable frequency drive. It brakes the cylinder by decelerating the motor from full-load speed (high extract) to zero speed at a controlled rate.

There are no brake shoes and no alignment problems commonly associated with mechanical systems.

## Suspension and Tilting

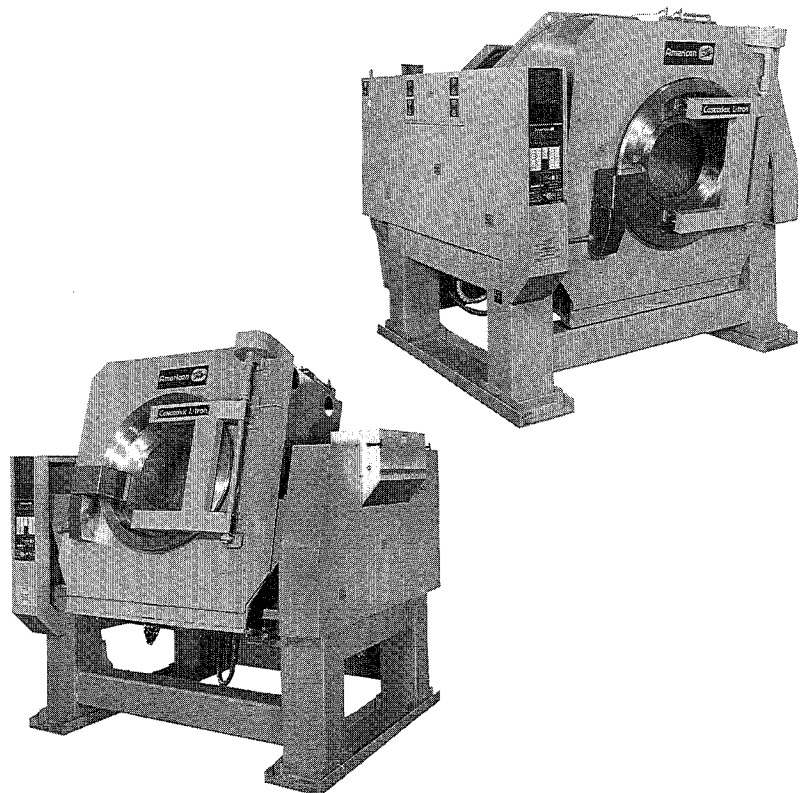
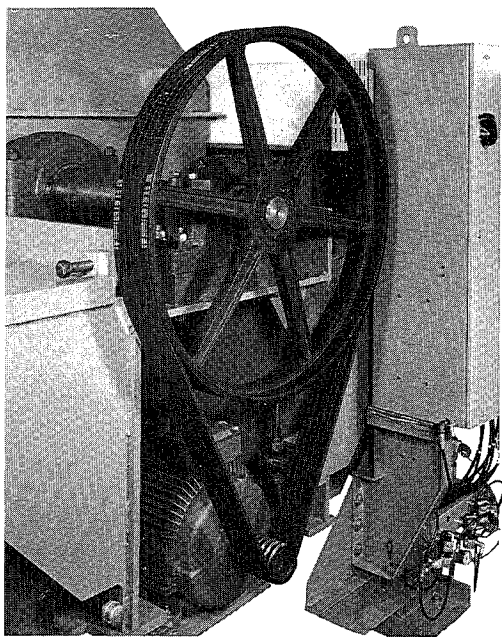
The L-tron makes use of four air bags during extraction, one at each corner. These air bags are used for both tilting and vibration isolation. Air bags provide almost perfect vibration isolation, 99.25%. Air bags are much easier to maintain than conventional tilt systems since there are no cylinders, pumps or fluids to check and replace.

In tilting mode, these airbags tilt the machine 15° backward for loading or 10° forward for unloading. Other degrees of tilt are available as options. The door opens and closes automatically for additional loading and unloading efficiency.

There are no springs, shock absorbers or physical linkage to the fixed portions of the machine. This system eliminates the need for a special foundation, making upper-floor installations practical.

## High extract "G" force

The 450 pound L-tron has two extract speeds: a low one, ideal for polyester blends and a high speed that exceeds 300 G's.



One motor and one drive power all major functions

Two-way tilt action minimizes loading and unloading time

### Electronic Load Distribution

Out of balance testing is done at distribution speed with the machine in the wash position. This reduces energy and air consumption, saves time and reduces wear and tear on the bearings and cylinder.

Optimum ramping (precise control of both time and speed) is controlled by a combination of American's Process 85 Microprocessor Control and the Analog Processing Unit (APU). This unique design is patented worldwide.

American's fast "RETRY" system prevents extraction should out-of-balance exceed the safe limit. If shut-down does occur, the system quickly tries again, automatically.

### Large Open-Air Cylinder

The open-pocket cylinder, sized at 66" x 38" (1674mm x 965mm) will easily accept 450 pound (204 Kg) loads. Easy entry is assured through the large 40" (1016mm) diameter opening.

### Excellent Washing Action

Because there are no cylinder partitions, the work receives full-drop action, plus three cylinder reversals per minute for thorough washing with a minimum of supplies.

The cylinder ribs are preformed as an integral part of the cylinder sheet so that there are no weld burrs or slag that could cause snags.

### Patented Pumping Rib

Conventional systems chemically soak the load only when it's at the bottom of the cylinder. Our unique pumping rib cylinder also injects water and chemicals down onto the load. This provides:

- Faster chemical penetration
- Shorter wash cycle
- Reduced chemical and water usage

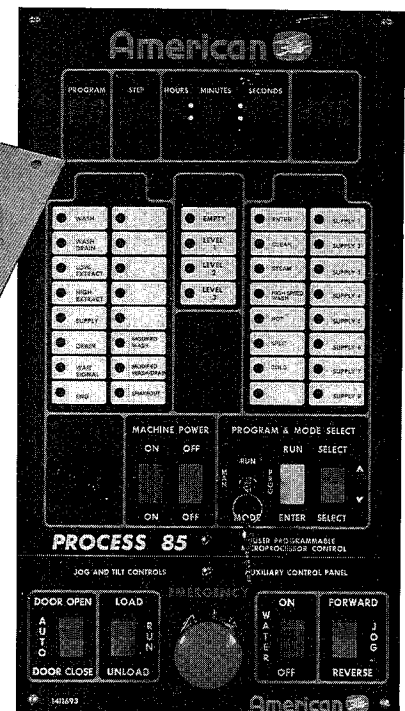
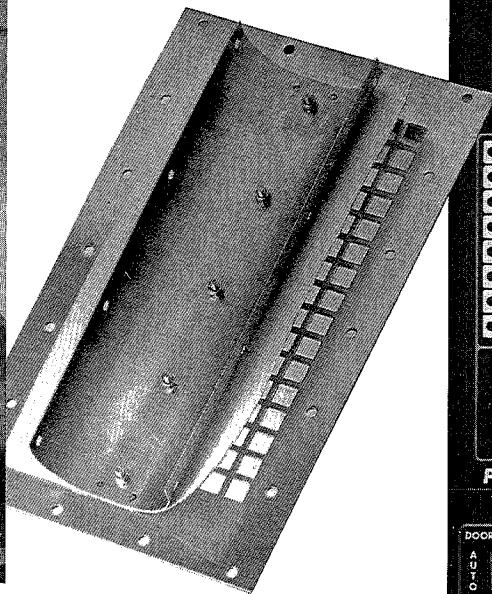
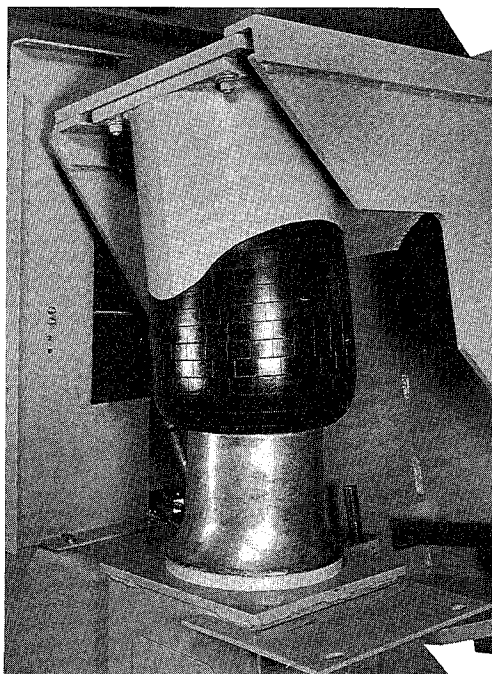
### Microprocessor Control

The Process 85 Control is designed and built by American. It is capable of holding 40 field programmable formulas. Plus, steps can be changed, added or erased at will.

Process 85 automatically monitors and controls water levels, cycles and temperatures from 40 degrees to 180 degrees F (4 degrees to 90 degrees C) in one-degree increments. It even monitors all operations of the washer-extractor through a self-diagnostic system that alerts the operator, both audibly and visually should the machine malfunction. Process 85 will even pinpoint the exact location of the problem. In the event of power shutdown, Process 85 returns to program status on restart.

### Supply Interface

Interface for eight liquid supplies is standard on the L-tron. An *Automatic Supply Dispenser*, a recessed, six compartment, dump type unit that accommodates both liquid and dry supplies is available as an option.



*Air bag tilting and suspension systems reduce maintenance requirements*

*Patented pumping ribs evenly disperse water and chemicals throughout cycle*

*American's microprocessor control monitors all washer-extractor operations*

Category	L-tron	Conventional Washer/Extractor (Some of the following may apply)	Approximate basic dimensions and weight	
			U.S.	METRIC
Motors	1 AC Motor	Up to 5 AC/DC Motors	Width	97" 2464 mm
"Run Away" Potential	None	Yes	Depth	104" 2565 mm
Clutches	None	Yes	Height	99" 2515 mm
Reducers	None	Up to 2	Height	111-1/2" 2832 mm
Jack Shafts	None	Yes	(tilt position)	
Jack Shaft Bearings	None	Yes	Weight (net)	14,310 lbs. 6491 Kg
Hydraulic Brake & Shoes	None	Yes	Weight	
Hydraulic Pump	None	Yes	(skidded lbs.)	14,890 lbs. 6754 Kg
Hydraulic Fluid	None	Yes		
Springs, Shocks	None	Yes		
Special Foundation Requirements	None	Yes		
Base to Raise	None	Yes		
Unloading Height	None	Yes		



**AMERICAN**

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Machine is subject to manufacturer's standard warranty. Accuracy of illustrations and description of equipment shown herein applies to product as manufactured at the time of publication.

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