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**1** To begin the process, bottles are placed on the 48" Rotary Feed Table. The Feed Table includes specially designed bottle guides to help keep the bottles feeding onto the conveyor properly without the risk of the bottles tipping over.
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**2** The Norland BR5000 effectively rinses up to 85 bottles per minute. The bottles are fully inverted and rinsed with product water or air.
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**3** The BF5000 Bottle Filler Control Panel allows for quick assessment of the operation of the system.
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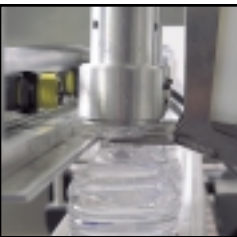
**4** The unique locking mechanism on the BF5000 Bottle Filler ensures bottles are correctly positioned to minimize spillage of water during the filling process.
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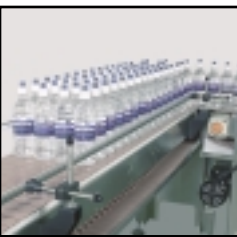
**5** The LC5000 includes a large-capacity Cap Hopper that holds a full carton of caps. The top of the Cap Hopper is located at approximately 48" (1.88m) above floor level for easy loading of caps.
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**6** The labeling process incorporates the Original Label Spool, a series of Roller Tension Pins and a Spool Take-Up Wheel for label dispensing.
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**7** After the caps are sorted, they are conveyed to the Final Cap Application Chute where they await placement onto the filled bottles.
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**8** As the caps are placed on the bottle, they are slightly pressed onto the bottle but are not completely tightened.
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**9** Once moved into position, the bottles are held in position to prevent them from spinning during the cap tightening process.
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**10** A unique feature of the Cap Tightener is the adjustable clutch control mechanism allowing the operator to choose the selected torque of the cap.
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**11** The filled and capped bottles are then moved down the conveyor for collection onto an inline collection conveyor or a rotary accumulation table.

## High Production, Small Bottle Packaging has never been easier!

The SpectraPak System will process up to 85 round bottles per minute to keep pace with your small-bottle needs. It has been designed to run multiple shifts with little operator expertise and is tremendously versatile. State-of-the-art design and modular components provide maximum performance and economy for filling 335ml up to 1 gallon (3.8 litre) bottles with water or other free-flowing liquids.

The SpectraPak System can be designed to operate in several different configurations. Systems are available to operate in a straight line manner, or in a right-angle manner to fit small, confined areas.

The various components are mounted to the side of a continuously moving conveyor. All components described are available separately also. The standard conveyor length is 30' (9.1 meters) for straight line installations. A variety of conveyor lengths are also available for installations requiring a 90 degree turn or other configurations.

The conveyors are all constructed of type 304 polished stainless steel and long-wearing, easy-to-clean Acetal and feature high-quality, American-made drive motors. These systems are designed to last for many years while providing a maximum of reliability.

SpectraPak 5000 Line Equipment Dimensions				
	Height	Width	Depth	Weight
48" Feeder Table	54" (137cm)	49" (124cm)	53" (135cm)	252 lbs. (115kg)
BR 5000 Rinser	52" (132cm)	66" (168cm)	22" (56cm)	450 lbs. (205kg)
BF 5000 Filler	61" (155cm)	70" (178cm)	51" (130cm)	906 lbs. (412kg)
LC 5000 Labeler/Capper	71" (180cm)	53" (135cm)	21" (53cm)	421 lbs. (191kg)
LC 5000 Elevator	87" (221cm)	48" (122cm)	55" (140cm)	150 lbs. (68kg)
CC 5000 Tightener	64" (163cm)	40" (102cm)	42" (107cm)	480 lbs. (218kg)
DC 5000 Date Coder	38" (97cm)	28" (71cm)	28" (71cm)	431 lbs. (196kg)
48" Accumulation Table	54" (137cm)	49" (124cm)	53" (135cm)	252 lbs. (115kg)
12" x 12' Accumulation Conveyor	49" (124cm)	16" (41cm)	144" (3.6m)	648 lbs. (295kg)
24' Conveyor	49" (124cm)	22" (56cm)	292" (7.4m)	825 lbs. (375kg)

### Norland's Liquid Assets:

- SpectraPak Filling & Capping Line
- BF150 Bottle Filler
- BM600 Stretch Blow Molding System
- BW150 Bottle Washer
- BWF300 Auto Washer/Filler/Capper
- Ozone Disinfection Systems
- High Efficiency Water Distillation Systems


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SpectraPak 5000

# BIG BUSINESS in small bottles



Your Complete Source


**Norland INT'L. INC.**

# Your Complete Source for Components to . . . *Turn-Key Systems*

•ACCUMULATION CONVEYOR

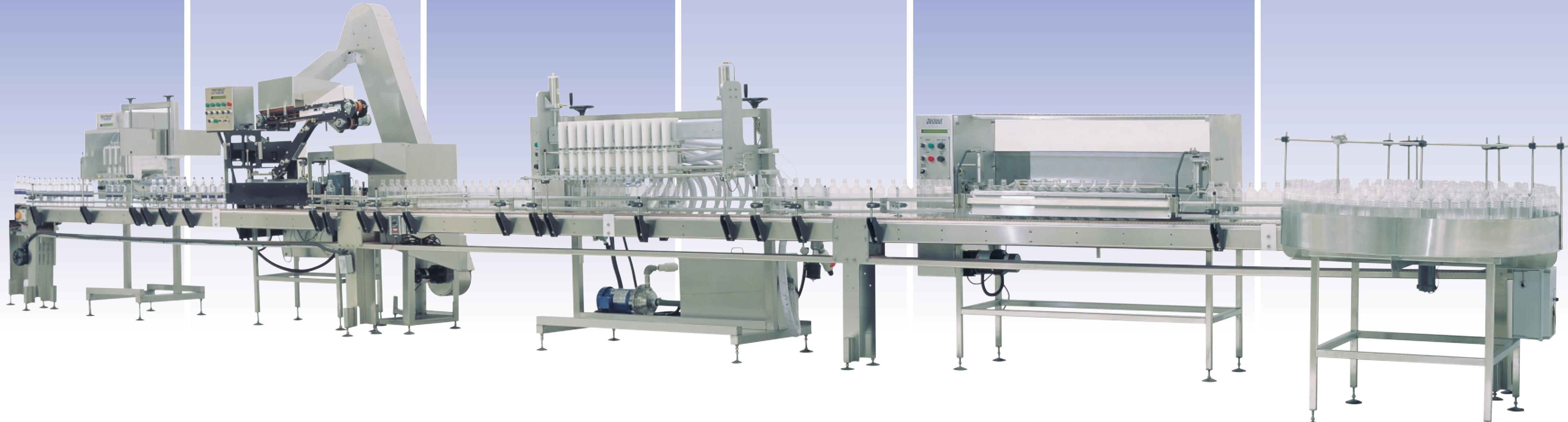
•CC5000 CAP TIGHTENER

•LC5000 LABELER/CAPPER

•BF5000 BOTTLE FILLER

•BR5000 AUTOMATIC BOTTLE RINSER

•BOTTLE FEED TABLE



## *LC5000 Labeler/Capper/Cap Tightener*

The labeler and capper for the SpectraPak 5000 line is one of the most unique Labeling and Capping systems available and is offered in two versions. One version, the LC5000 is the system that combines both Capping and Labeling Functions in one movement. Both functions are mounted on the same durable frame and share similar electric connections, air supplies and mounting fixtures. This helps to reduce the overall system cost, lessens the need for additional spare parts and conserves space since a second piece of equipment is not required.

Alternatively, the Labeler and the Capper can be separated into the Capper and Labeler. Separating the Labeler and Capper may be required to meet special local codes or requirements that requires the labeler to be placed outside of the clean room.

As the bottle enters the labeling area, the self-adhesive/pressure sensitive labels are automatically and accurately applied. The LC5000 includes a large-capacity Cap Hopper that holds a full carton of caps and automatically elevates the caps to the Automatic Cap Sorter.

After the caps are sorted, they are placed onto the top of the bottle. Once the cap has been properly fitted to the bottle, it is then moved down the conveyor and into the CC5000 Automatic Cap Tightening System. The LC5000 can be designed to operate effectively with either 28mm or 38mm flat and sports type caps.

## *BF5000 Bottle Filler*

Bottles enter the filling area where they are counted by a pair of Optical Sensors. The bottles are then locked into position prior to filling by the pneumatically operated Bottle Clamping Mechanism. This mechanism ensures that the bottles are positioned correctly under each filling head, thus reducing under or over fill.

The Filler utilizes a series of valves that descend into the bottle for fast, accurate and consistent filling. Any excess water delivered to a bottle is diverted from the bottle and is routed to a collection tank.

The Controls for the BF5000 are located at easy viewing height to monitor the system at a glance. The LCD digital readout allows for quick assessment of the operation of the system.

The filled bottles are then released from the Bottle Clamping Mechanism and directed to the capping and labeling phase of the process. The BF5000 is constructed of 304 polished stainless steel, solid-state electronics food grade approved materials to provide for years of durable, reliable and trouble-free operation.

## *BR5000 Automatic Bottle Rinsers*

The BR5000 is designed to effectively internally-rinse up to 85 small bottles per minute. It is ideal for rinsing bottles ranging in size from 12 oz. (335ml) up to 1 gallon (3.8 liters) in virtually any shape - round or square-plastic or glass. The computerized controls are reliable and easy-to-adjust. The digital LED display offers precise operating instructions and immediate troubleshooting information at a quick glance. Optical Sensors ensure smooth and trouble-free operation. If the flow of bottles is interrupted, the system will pause automatically until the supply of bottles is resumed.

Once in place, the bottles are turned upside down, where they are internally rinsed with either product or operations water. High-pressure nozzles direct the water inside the bottles for an effective rinsing operation. The bottles drain and are then turned right-side up and repositioned on the main conveyor where they are released from the Clamping Mechanism and fed into the BF5000 Automatic Bottle Filler. The Plexiglass top panel allows the operator to monitor the process at all times. The entire operation of this system is automatic, complete and simple.