

CanNeck™ Lubrication Systems



Non-contact lubricant application systems provide increased productivity and greater quality control for can-necking operations using wax or mineral oil.

Controlling the amount and placement of lubricant applied during the necking process is critical to successful two-piece can manufacturing. Inconsistent application of lubricant material during the can-necking process can lead to improper necking, increased rejects, material waste and maintenance downtime.

Nordson CanNeck Lubrication systems employ a non-contact application method to apply a defined, controllable and repeatable bead of lubricant to the open end of two-piece cans. Eliminating contact between the can and the applicator assures accurate bead placement, reducing the incidence of pleating and black line problems associated with typical wick or roller systems.

The systems provide accurate, adjustable control with varying line speeds of up to 3,000 cans per minute. In addition, CanNeck Lubrication systems maintain the size and placement of the bead as line speeds change. Users can easily vary the amount of lubricant to accommodate different requirements, including abrasion characteristics of different inks.



Controlled application also promotes clean tooling by preventing excess lubricant from building on equipment. The cleaner environment extends periods of operation between line clean-ups and minimizes line stoppages caused by excess lubrication.

Nordson offers two CanNeck Lubrication systems, which are designed for the application of either mineral oil or wax lubricants to meet specific production requirements.

The CanNeck System for Wax Lubricants

The CanNeck wax lubrication system is designed for the controlled application of wax lubricants. The system consists of a low-level

detector, pattern control timer, heated hose, heated electric gun, low-pressure pneumatic piston pump and a Nordson Model 3500 Applicator equipped with MultiScan® controls for exceptional temperature control stability.

Model 3500 Applicator



CanNeck Lubrication Systems

The Model 3500 Applicator has a 6:1 ratio dual-acting reciprocating pump for durability and reliable performance. The applicator holds 8.6 kg (19 lbs.) of wax lubricant material and melts at a rate of 9.5 kg (21 lbs.) per hour. A low-level detector is located inside the tank to alert operators to add lubricant, helping to eliminate line stoppages.

The MultiScan controls offer micro-processor-based diagnostics. The applicator, guns and hoses can be controlled independently. The CanNeck MultiScan unit is calibrated for low temperatures (90° to 250° F) and provides control stability of +/- .05° Celsius (+/- 1° F).

The CanNeck System for Mineral Oil Lubricant



Nordson also offers a CanNeck Lubrication system for can-necking applications that use mineral oil lubricant. This configuration utilizes an airless spray hydraulic system and, similar to the CanNeck wax system, includes a low-level detector, pattern control timer and a heated electric gun. The CanNeck mineral oil system also employs a lubricant temperature controller for consistent material flow.

A five-gallon container, interfaced with the fluid level controls, holds the lubricant. The system's pump also provides dual-acting reciprocation for consistent material flow and minimized pressure winks. In addition, a low-pressure regulator maintains the spray pressure supplied to the gun from 0 to 80 psi, resulting in more uniform bead deposition.

CanNeck Lubrication System Controller

Both CanNeck Lubrication systems use a similar package to control gun operation.

The controller contains a CS-2T pattern control timer, allowing adjustable line speeds from 10 to 600 feet per minute. A CN-2 driver is included in the control package to trigger the gun. A temperature controller is utilized on the CanNeck mineral oil system to regulate the temperature of the E-201 dispensing module.

In addition, centralized terminal strips are placed inside the control enclosure to allow for quick wiring and easy installation.



E-201 Dispensing Module

The Nordson E-201 dispensing module works with the CanNeck Lubrication systems' CN-2 driver to maximize reliability and durability.

The driver signals the high-temperature coil to activate the E-201 dispensing module. After the coil pulls the plunger off its seat, the driver reduces the electric current to protect the coil from overheating, increasing service life.



The E-201 dispensing module incorporates an advanced design, eliminating dynamic seals to reduce wear. The durable E-201 module operates at speeds up to 3,000 cycles per minute.

Nordson's CanNeck Lubrication systems can be configured with single or multiple E-201 dispensing modules, based on production requirements.

Features and Benefits

- **Automatically adjusts amount of lubricant dispensed** with varying line speeds up to 3,000 cpm to minimize pleating and black lines.
- **Two different system configurations** offer the ability to dispense either mineral oil or wax lubricants to meet specific application requirements.

■ **Simple adjustment** of the amount of lubricant dispensed to accommodate abrasion characteristics of different inks.

■ **Low-level detector** alerts operator to add lubricant without interrupting production.

■ **The systems incorporate a Nordson E-201 dispensing module** for clean, accurate deposition while extending module coil life.

Technical Specifications

E-201 Dispensing Module

Working hydraulic pressure:
1000 psi (6.89 mPa)

Operating speed: 1200 cpm

Coil:

Open: 130 VDC, 5 ms
Holding: 19 VDC, continuous

Operating temperature:
Rated at 350°F (177°C)

Nozzle diameter range:
.008 to .024 in (.2 to .6 mm)

Electrical requirements:
200 VAC, 50/60 Hz or
240 VAC, 50/60Hz

CN-2 Driver

Specifications:
Weight: 5 lbs. (2.27 kg)

Operating temperature:
32°-140°F (0°-60°C)

Line speed input:
Proximity sensor to analog converter, 0-10 VDC

Input triggers:

Voltage: 5-24 VDC, 4-15 mA
Type: Switch closure, semiconductor switch, optical or proximity detectors

Output switching/gun output:
5-60 VDC, 3A (amp); DC output relay 60-250 V~, 5A (amp); AC output relay

Power supply output voltage:
12 VDC, 200 mA
Power for photoeyes and external triggers

Electrical requirements:
110-115 VAC, 25W, 50/60 Hz
200-230 VAC, 25W, 50/60Hz (only 230V models are certified for use in countries requiring the CE mark.)

Accuracy and repeatability: +/-0.5 ms

Model 3500 Applicator

Type of system:

Piston pump with externally circulating or non-circulating manifold

Specifications:
Weight: 90 lb (41kg)

Tank capacity/tank volume:
19 lb (8.6 kg)/540 in* (8.9 L)

System melt rate: 21 lb/hr (9.5 kg/hr)

Maximum pumping rate:
Piston pumps:
up to 1.2 lb/min (5.4 kg/min)

MultiScan control temperature range:
90-250°F (30-121°C)

Temperature control stability:
+/-1°F (+/-0.5°C)

Electrical service:

200-240 VAC, 50/60 Hz, 1Ø or 3Ø

Maximum working hydraulic pressure:
540 psi, 6:1 piston pump (3.7 mPa)

Maximum system power capacity @230 VAC³:
3500 with 3Ø power

4823 watts (18 amps) with 2 hoses/guns

6823 watts (26 amps) with 4 hoses/guns

8823 watts (26 amps) with 6 hoses/guns

3500 with 1Ø power

4823 watts (21 amps) with 2 hoses/guns

6123 watts (27 amps) with 4 hoses/guns

³Maximum capacity represents total system capability; actual power consumption depends on hose length and gun type installed.

Nordson reserves the right to make design changes to products to improve their function. These changes may occur between printings.

Nordson Corporation is pleased to offer worldwide sales and service support through an integrated network of regional offices. Please contact these locations for the name of your local representative.

United States

Amherst, Ohio
Telephone: (440) 985-4226
Facsimile: (440) 985-5110

Canada

Markham, Ontario
Telephone: (905) 475-6730
(800) 463-3200
Facsimile: (905) 475-8821

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Houten, The Netherlands
Telephone: (31) 30-6340014
Facsimile: (31) 30-6350816

Japan

Tokyo, Japan
Telephone: (81) 3-5762-2700
Facsimile: (81) 3-5762-2701

Asia/Australia/Latin America

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Facsimile: (440) 985-3710
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