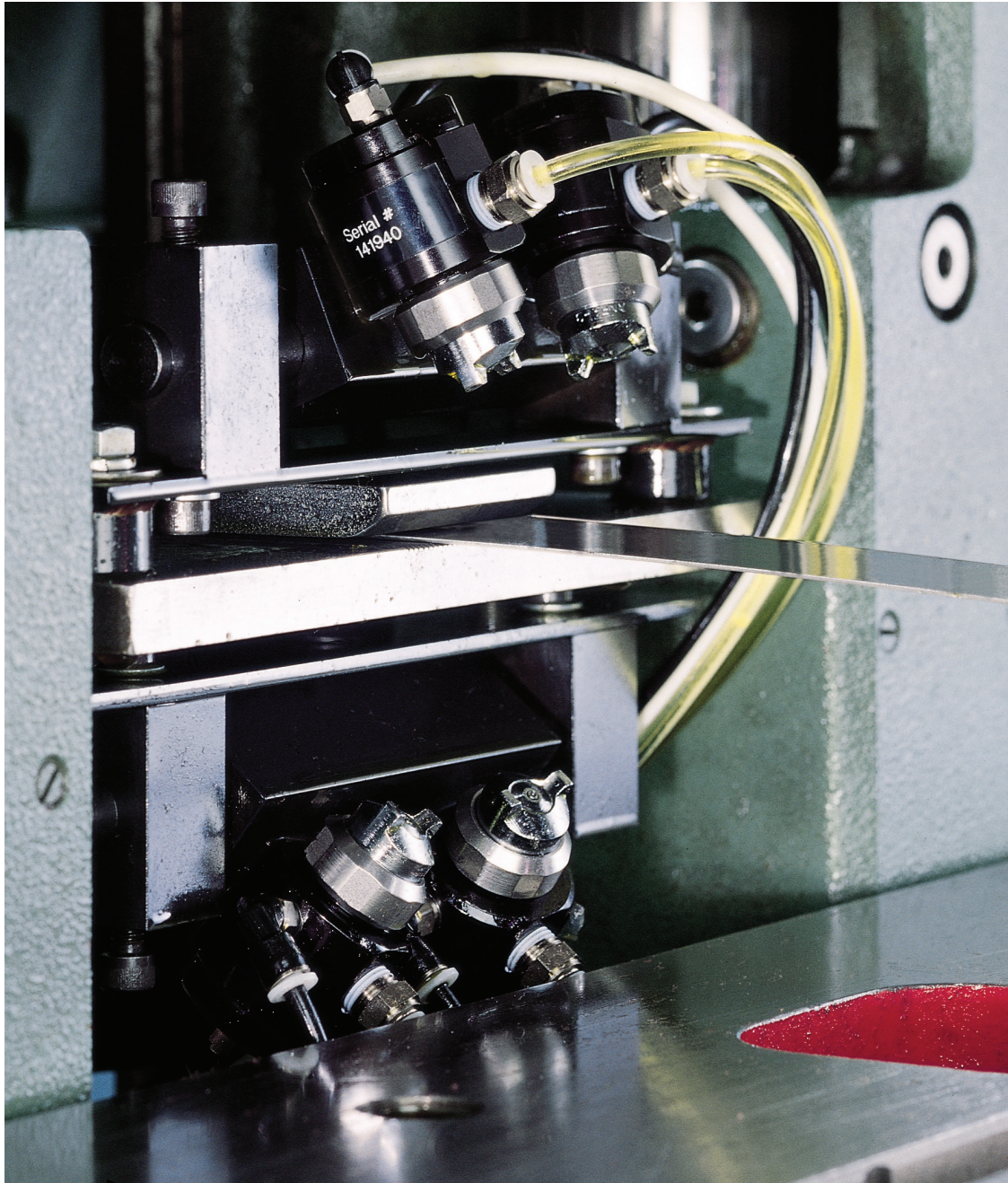


Nordson EFD Solutions:

Precision Fluid Dispensing for Stock Lubrication and Metal Stamping



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Introduction

Metal stamping applications

Lead frames & connectors
Electrical connector pins, terminals
Electrical components
Endforming staples
Connectors for automotive wiring harnesses
Terminals, connectors for white goods
Automotive keys & lock assemblies
Beverage can tops & ring pulls
Aerosol valve ends
Candy tins
Microwave components
Can lids & ends
Lightbulb bases
Aluminum extrusions
Lock set components
Razor blade components
Controls for automotive accessories
Contract shops
EFI connectors
Hose clamps
Automotive radiator & air conditioner fins
Semiconductor lead frames
Torque converter components
Transformer & motor laminations

Nordson EFD's MicroCoat® is the first stock lubrication system to provide truly consistent oil coverage.

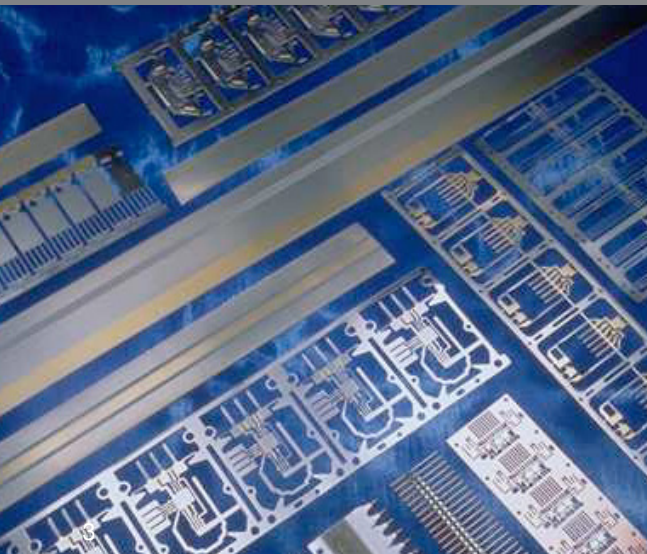
The system quickly pays for itself with significant savings throughout the pressroom – from extended tool life and reduced oil use to cleaner parts and lower waste disposal costs.

In the following pages, we'd like to share with you the experiences of MicroCoat users worldwide.



SEE IT IN ACTION

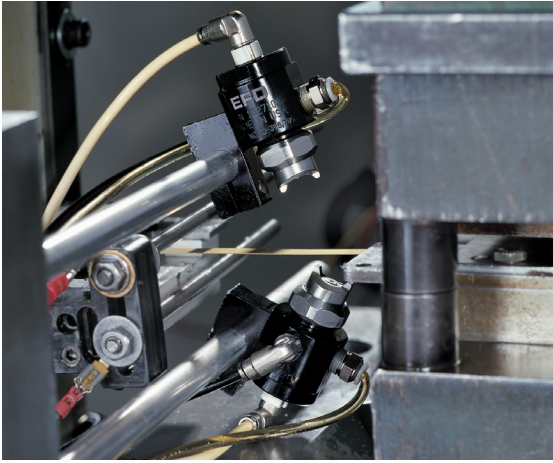
www.nordsonefd.com/MicrocoatVideo



Stock Lubrication Solutions

Connectors for Circuit Boards, Cell Phones, Appliances, and Automobiles

Photo courtesy of Zierick Manufacturing Corporation



"We stamped over 900,000 parts using only 1 gallon of oil. When we checked the tool under a microscope, there was no visible wear."

**AJAY SHARMA, MANUFACTURING ENGINEER
ZIERICK MANUFACTURING CORPORATION**

Application Requirements

Stock: Brass, bronze, copper, stainless steel

Press Type: Bruderer & Minster 25—60 tons

Speed: 400–1000 SPM

Previous Process

Drip systems, pressurized rollers

Issues with Previous Process

No control – stock was flooded with oil. This led to waste, maintenance, cleanup and disposal problems.

Solution

Installed 22 MicroCoat systems

Results

Consistent stock lubrication – using 60% less oil. Longer tool life. No pressroom puddles. **Savings of \$19,000 per year.**

Connectors for Automotive, Appliance, and Power Tool Applications

Photo courtesy of ETCO Incorporated



"The MicroCoat has increased die life 50%, reduced maintenance and downtime, and has given us greater production capacity. Plus, part consistency is dramatically better."

**DENNIS HERDEGEN, VICE PRESIDENT OF
MANUFACTURING ETCO INCORPORATED**

Application Requirements

Stock: Brass, steel, beryllium, copper

Press Type: Bruderer

Speed: 600–1800 SPM

Previous Process

Roller systems

Issues with Previous Process

Roller systems were inconsistent – applied too much or too little oil.

Solution

Installed 10 MicroCoat systems

Results

Consistent coverage extended sharpening intervals by 500,000 strokes. Reduced sludge by 90%. Improved part quality. Reduced tool damage.



Stock Lubrication Solutions

Microwave, Automotive, and Electronic Components

Photo courtesy of Sharp Precision Manufacturing, UK Ltd.



"The savings have been staggering! Now that we lubricate only the stock – not the floor – we've reduced oil use by about 90%."

**TONY DALY, PROJECT & MAINTENANCE MANAGER
SHARP PRECISION MANUFACTURING, UK LTD.**

Application Requirements

Stock: Stainless steel and mild steel

Press Type: Erfurt, 400 tons

Speed: 32 SPM

Previous Process

Airless spray system

Issues with Previous Process

Airless spray system required so much pressure that there was more oil on the floor than on the components.

Solution

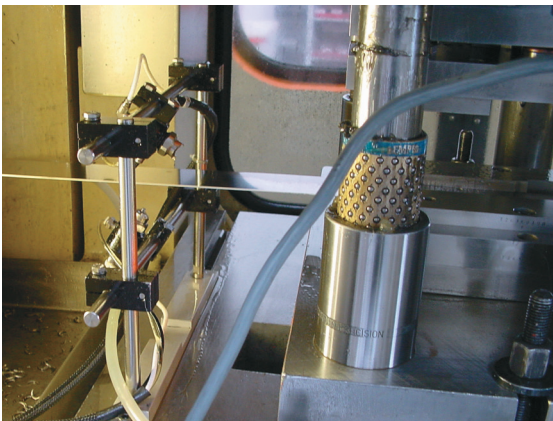
Installed 4 MicroCoat systems

Results

Created a cleaner work environment. Cut oil use almost 90%.
Eliminated manual degreasing. Simplified inspection. Reduced hazardous waste.

Electronic Security System Components

Photo courtesy of La Société Mécagis (France)



"We were very impressed with the MicroCoat's easy installation. Only two connections were needed – one to the compressed air system and one to the press."

**OLIVIER HIRONDELLE, PROCESS ENGINEERING MANAGER
LA SOCIÉTÉ MÉCAGIS (FRANCE)**

Application Requirements

Stock: Ferrous cobalt alloys, nickel

Previous Process

Rollers and airless spray systems

Issues with Previous Process

Uneven coverage caused equipment to seize up, and the spray system they tried created a greasy mist.

Solution

Installed 3 MicroCoat systems

Results

Eliminated lubrication-related downtime and tool damage.
Extended time between tool sharpenings 30-50%.
Oil use down 20%. No oil recycling expense.

Stock Lubrication Solutions

Fin Mills Used to Make Fins for Automotive Radiators and Other Systems

Photo courtesy of Ecko Tool Inc.



"We started offering the MicroCoat as an alternative to drip pad systems, but positive customer feedback has made it the standard lubrication system on every new fin mill we produce."

**MIKE CARAPELLATTI, SENIOR ENGINEERING DESIGNER
ECKO TOOL INC.**

Application Requirements

Stock: Aluminum

Previous Process

Pad lubrication systems

Issues with Previous Process

Pad systems not accurate enough for their mills to run at optimum speed.

Solution

Installed 10 MicroCoat systems

Results

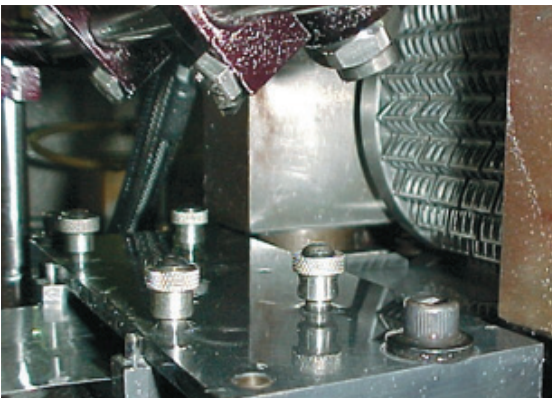
Optimized fin mill performance. Increased die life 30-50%.

Lowered VOC (Volatile Organic Compound) levels.

Cut oil use 50%. Reduced maintenance & downtime.

Evaporators for Automotive Heat Exchanger Applications

Photo courtesy of Daimler Chrysler



"Changing the lubrication process had a positive environmental impact – emissions were reduced by 14,000 pounds, the energy needed to heat the de-oiling ovens and power the incinerators has been conserved, and the work environment improved."

JEFF HOMAN, DAIMLER CHRYSLER

Application Requirements

Stock: Varies

Previous Process

Oil bath

Issues with Previous Process

Natural gas, thermal de-oiling ovens were used to burn off excess oil from parts and produced harmful emissions.

Solution

Installed 8 MicroCoat systems

Results

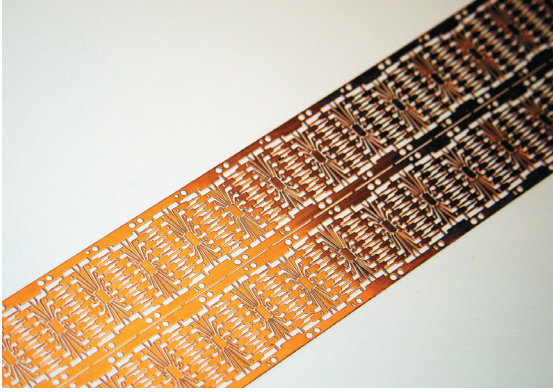
Eliminated need for thermal de-oiling ovens and reduced emissions by 14,000 pounds. Cut oil use 75%, decreased downtime 70%, and reduced scrap 40%.

Savings of \$2.7 million: \$282,744 in lubricant, \$294,560 in downtime, \$102,116 in scrap, and \$51,480 in preventive maintenance.

Stock Lubrication Solutions

Lead Frames for Semiconductors

Photo courtesy of Dynacraft Industries



"One of the key reasons we chose the MicroCoat was the professional manner and dedicated support provided during the equipment evaluation period."

IAIN MEIKLE, CHIEF OPERATING OFFICER
DYNACRAFT INDUSTRIES, SDN BHD (MALAYSIA)

Application Requirements

Stock: Copper, alloys

Press Type: Bruderer

Speed: 250–900 SPM

Previous Process

Drip system

Issues with Previous Process

Slug pulling, over-lubrication, excess oil surrounding press and press bed, and high reject rates. Excess waste removed twice weekly.

Solution

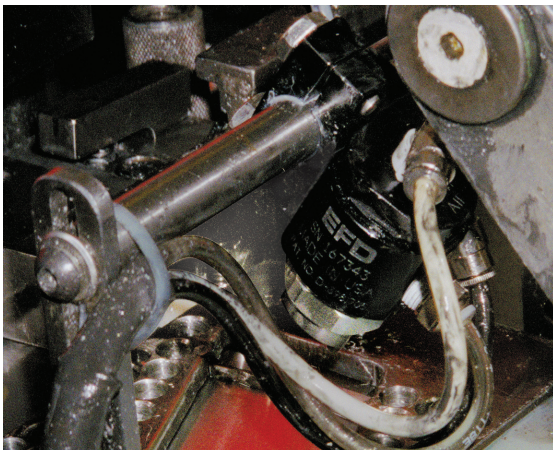
Installed 46 MicroCoat systems

Results

Uniform oil coverage. Improved process control, increased throughput, and extended die life. Lower degreasing costs, fewer rejected lots, and significant oil savings.

Beverage Can Ends and Pull Tabs

Photo courtesy of Crown Cork & Seal Company



"The MicroCoat's measured, consistent lubrication has significantly improved die life and reduced lubricant residue."

DERRY CASSON, ENGINEERING COORDINATOR
CROWN CORK & SEAL COMPANY, INC. (UK)

Application Requirements

Stock: Aluminum

Press Type: Minster

Speed: 620 SPM

Previous Process

Drip pads

Issues with Previous Process

Pad systems' coarse adjustment could not provide the accuracy and control needed to meet a demanding industry specification.

Solution

Installed 2 MicroCoat systems

Results

Precise oil coverage and increased specification compliance. Reduced lubricant residue. Longer tool life.*

*Proprietary data



Cartridge Belts for Military Ammunition

Application Requirements

Stock: Annealed spring steel

Press Type: Minster, 150 tons

Previous Process

Rollers, airless spray system

Issues with Previous Process

Excessive oil use, tool wear, and pressroom mist

Solution

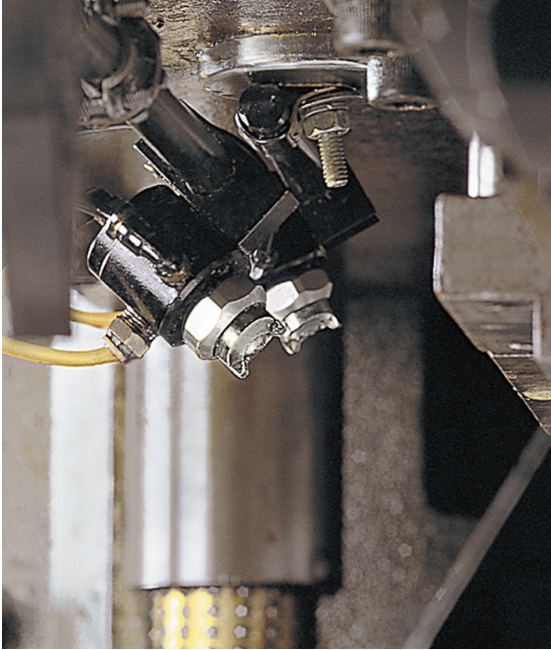
Installed a MicroCoat system

Results

Cut oil use by 90% and eliminated pressroom mist.

Increased tool life 40%, reduced maintenance 33%, and cut waste disposal costs in half. **Savings of \$13,000 per year.**

Photo courtesy of National Metals Technologies



"Our dies now stay in such good shape, we've upped the interval between sharpenings by 40%."

**JOHN WILSON, CHIEF OF OPERATIONS
NATIONAL METAL TECHNOLOGIES**

Useful Resources



Application Videos

Visit our Video Gallery to access 150+ application, how-to, and product videos. See EFD dispensing solutions in action.

Watch Videos: www.nordsonefd.com/VideoGallery



Expert Recommendations

Knowledgeable Nordson EFD fluid application specialists have, on average, more than 10 years of experience helping customers find the right dispensing solutions.

Request Expert Advice: www.nordsonefd.com/Advice



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CAD Models

When you partner with Nordson EFD, you benefit from a wide range of reliable, best-in-class precision fluid dispensing solutions.

Download CAD models: www.nordsonefd.com/CAD



Valve Selection Guide

Quickly find valves by application and fluid type to get an idea of the breadth of dispensing solutions provided by Nordson EFD.

Download Valve Guide: www.nordsonefd.com/ValveGuide

Stock Lubrication Solutions

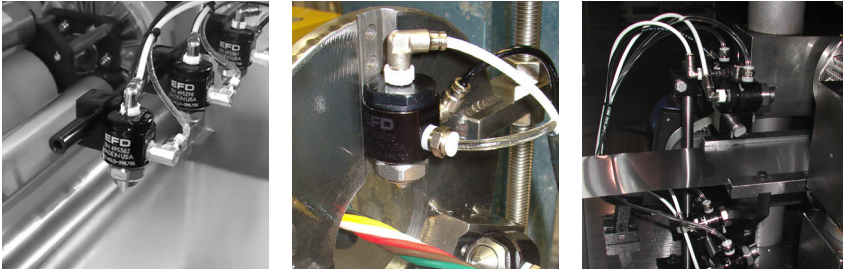
Request More Information

Nordson EFD's worldwide network of experienced product application specialists are available to discuss your dispensing project and recommend a system that meets your technical requirements and budget.

Call or email us for a consultation.

800.556.3484 info@nordsonefd.com

www.nordsonefd.com/Advice



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