

## 2017 Training

For SE All-Electric, El-Exis SP, Systec and Van Dorn legacy machines and controls



Pre-scheduled and customized technical training is available at:

- Your facility
- Our Tech Center in Ohio
- Our Tech Center in Georgia

## Training to Meet Your Needs

Sumitomo (SHI) Demag's philosophy is to offer a carefully prepared training experience that satisfies the needs of all who participate. Therefore, if you are new to the injection molding process or a veteran of processing challenges, you will learn valuable information you can apply to your job responsibilities.

Our training courses cover processing, machine optimization and maintenance on our current machines as well as on a variety of our older machines. The courses are all designed to help improve your molding efficiency and overall productivity by achieving the optimum performance of your Sumitomo, Demag and Van Dorn machines.

### Customized in-plant programs

Customized training programs, held at your facility using your equipment, are available for all Sumitomo, Demag and Van Dorn machine models. Our Training team will work with you to design an individualized program that will best meet your needs — from hands-on machine operation and maintenance to advanced processing and application-specific process optimization.

### Pre-scheduled classroom training

Affordably priced, pre-scheduled training courses are offered at Sumitomo (SHI) Demag's training facilities, away from production concerns and responsibilities. Course descriptions, dates and costs for 2017 are detailed in this brochure. Where possible, corresponding courses are consecutively scheduled, allowing attendees to take both courses in a single trip.

### A choice of locations

Sumitomo (SHI) Demag offers customers a choice of three locations:

- Customized training in your facility
- Pre-scheduled training in our Cleveland Tech Center in Strongsville, OH (all machine/control series)

11792 Alameda Dr.  
Strongsville, OH 44149  
PH: 440-876-8960  
Fax: 440-876-4383

- Pre-scheduled training at the Atlanta Tech Center in Norcross, GA (SE Series all-electric machines\*)

1266 Oakbrook Dr.  
Norcross, GA 30093  
PH: 440-876-8960  
Fax: 440-876-4383

\*It is also possible to arrange scheduled classroom training for Demag and Van Dorn machines in our Atlanta Tech Center. Please use the contact information below to discuss your requirements.

### Additional information and registration

For additional information on pre-scheduled training or customized programs, please contact Mark Lepole at 440-876-6203 or via email at [Mark.Lepole@sdpma.com](mailto:Mark.Lepole@sdpma.com).

To register for any of the pre-scheduled classes, use the registration form found on the back page of this brochure. A pdf of this brochure with a form that can be completed on your computer can also be found at:

[sumitomo-shi-demag.us/pdfs/Training\\_Form\\_2017.pdf](http://sumitomo-shi-demag.us/pdfs/Training_Form_2017.pdf)

Don't see a class for your machine/control? Schedule doesn't fit yours? Please call us.

## SE Series All-Electric Machine Courses

### SE Series Processing Fundamentals

This processing fundamentals course is designed to provide the beginner to the intermediate processor with a good foundation to understanding the individual functions of the machine and auxiliaries that comprise the plastic injection molding system.

Hands-on operation will provide you with the confidence to solve molding problems and sharpen your molding skills.

4-days, 9:00 A.M. to 5:00 P.M.  
Course fee: \$1350

Location: **Atlanta** Tech Center  
Dates: March 13-16 and November 13-16, 2017



### SEEV-A/SEEV-A<sup>HD</sup> Machine Operation

The SEEV-A/SEEV-A<sup>HD</sup> Machine Operation course is designed for individuals who already have a basic understanding of injection molding machine functions and operation.

This classroom and hands-on course will familiarize you with the operation of the SEEV-A/SEEV-A<sup>HD</sup> all-electric injection molding machine series plus how to take full advantage of the NC-10 Z-Molding Control to optimize machine performance. Questions regarding earlier models will be addressed as needed.

2-days, 9:00 A.M. to 5:00 P.M.  
Course fee: \$900

Location: **Atlanta** Tech Center  
Dates: February 7-8, April 18-19, June 13-14, August 15-16 and October 17-18, 2017

Location: **Cleveland** Tech Center  
Dates: March 21-22, May 16-17, July 18-19, September 19-20 and November 14-15, 2017

**NOTE:** For students attending both the SEEV-A/SEEV-A<sup>HD</sup> Operation and Machine Maintenance courses, the combined cost will be \$1600. The courses are consecutively scheduled to start on Tuesday and finish on Friday in 2017.



### SE-EV Training

*The courses on this page are also well suited for molders with SE-EV Series machines. For training on other SE machines with N-9 or earlier controls, please contact Mark Lepole using the information at the bottom of the page.*



### SEEV-A/SEEV-A<sup>HD</sup> Machine Maintenance

The SEEV-A/SEEV-A<sup>HD</sup> Machine Maintenance course is designed for individuals who have basic electronics and hydraulic skills as well as a good understanding of injection molding machine functions and operation.

This classroom and hands-on course teaches troubleshooting and maintenance of the new SEEV-A/SEEV-A<sup>HD</sup> all-electric machines as well as effective use of the NC-10 Z-Molding Control system. Questions regarding earlier models will be addressed as needed.

2-days, 9:00 A.M. to 5:00 P.M.  
Course fee: \$900

Location: **Atlanta** Tech Center  
Dates: February 9-10, April 20-21, June 15-16, August 17-18 and October 19-20, 2017

Location: **Cleveland** Tech Center  
Dates: March 23-24, May 18-19, July 20-21, September 21-22 and November 16-17, 2017

### Additional Training Courses

Machine operation and maintenance courses at your facility can be arranged for SE and SR all-electric and Sumitomo hydraulic legacy machines.

Please contact Mark Lepole for more information at (440) 876-6203 or via email at [Mark.Lepole@sdpma.com](mailto:Mark.Lepole@sdpma.com).

# Operation and Controls Training



## NC5 plus Control

This classroom course is designed for operators, set-up technicians and new personnel who require a basic understanding of the injection molding process, operator set-up screens, alarm faults and process monitoring. Course topics include:

- Understanding the machine sequence
- Machine safety features
- Machine overview (component identification)
- Operator interface
- Control screen description
- Clamp/ejector and core-pull system set-up
- Temperature control
- Injection process
- Set-up screens associated with injection
- Understanding closed loop
- Machine and production monitoring screens

2 days, 9:00 A.M. to 5:00 P.M. Course fee: \$900  
Location: Cleveland Tech Center  
Dates: March 28-29 and September 26-27, 2017



## VDU® Control

The VDU (Van Dorn Universal) Control course is designed for operators, set-up technicians and new personnel who require a basic understanding of the injection molding process, operator set-up screens, alarm faults and process monitoring. Topics for this classroom course include:

- Understanding the machine sequence
- Machine safety features
- Machine overview (component identification)
- Operator interface
- Control screen description
- Clamp/ejector and core-pull system set-up
- Temperature control
- Injection process
- Set-up screens associated with injection
- Understanding closed loop
- Machine and production monitoring screens

2 days, 9:00 A.M. to 5:00 P.M. Course fee: \$900  
Location: Cleveland Tech Center  
Dates: June 13-14 and October 3-4, 2017

# Maintenance and Troubleshooting Training for Hybrid and Hydraulic Machines

## EI-Exis SP Series - Electrical and Mechanical System Maintenance

This classroom course is designed for maintenance personnel (both technical and supervisory) who require a better understanding of the overall machine operation and maintenance including detailed circuit tracing of the hydraulic and electrical control systems. (Individuals requiring training on machine operation, screens or processing technology should attend the NC5 plus or NC4 Control course.) Course topics include:

- Basic machine operation and safety features
- Clamp and injection unit descriptions
- Maintenance and alarm/fault message screens
- Machine layout/component identification
- Preventive maintenance and lubrication requirements
- System diagnostics and troubleshooting
- Hydraulic drive systems: controls, symbols, print reading and advanced hydraulic controls
- AC drives and servo motors, basic theory, operation, calibration and troubleshooting
- System diagnostics - principles/function of input/output devices, hardware description and identification and amplifier cards
- Electrical symbols, control circuits and troubleshooting fault codes

3 days, 9:00 A.M. to 5:00 P.M.                      Course fee: \$1300  
Location: Cleveland Tech Center  
Dates: March 7-9, May 23-25, Oct. 10-12 and Dec. 5-7, 2017



## Demag NC4/NC5 Print Reading

This classroom course is designed for maintenance personnel who require more in-depth experience in machine troubleshooting to fully understand IEC standard prints and the proper calibration procedures for all sensors and components that require periodic adjustments. It is applicable for machines with NC4 and NC5 controls that have IEC (International Electrical Standard) prints. Course topics include:

- IEC symbols and extensive electrical print reading
- How to use the bit status screen in troubleshooting
- Basic operational and alarm/fault message screens
- Operation of smart pumps
- System diagnostics
- How to calibrate position sensors, pressure sensors and smart pumps
- NC4/NC5 control: system diagnostics - principles and function of input and output devices, hardware description and identification, and amplifier cards

3 days, 9:00 A.M. to 5:00 P.M.                      Course fee: \$1300  
Location: Cleveland Tech Center  
Dates: May 2-4 and Oct. 31 - Nov. 2, 2017



# Maintenance and Troubleshooting Training for Hybrid and Hydraulic Machines

## Systec Machines – Electrical and Mechanical System Maintenance



This classroom course is designed for maintenance personnel (both technical and supervisory) who require a better understanding of the overall machine operation and maintenance including detailed circuit tracing of the hydraulic and electrical control systems. (Individuals requiring training on machine operation, screens or processing technology should attend the NC5 plus Control course.) Course topics include:

- Basic machine operation and safety features
- Clamp and injection unit maintenance
- Hydraulic/electrical systems overview
- Alarm message, production monitor and calibration screens
- Preventive maintenance and lubrication requirements
- Machine troubleshooting
- Hydraulic systems: basic theory, controls, symbols, advanced hydraulic controls and hydraulic circuit analysis and test points
- NC5 plus Control: system calibrations, alarm faults and service screens, principles and functions of input and output devices, C-Dias control panel layout and hardware description, control modules description and electrical control circuit diagram

3 days, 9:00 A.M. to 5:00 P.M.                      Course fee: \$1300  
Location: Cleveland Tech Center  
Dates: March 14-16, June 6-8, Sept. 12-14 and Dec. 12-14, 2017



## Titan/Mid-size Caliber Series Hydraulic, Electrical and Mechanical System Maintenance, NC4 Controls

This classroom course is designed for maintenance personnel (both technical and supervisory) who require a better understanding of the overall machine operation and maintenance including detailed circuit tracing of the hydraulic and electrical control systems. (Individuals requiring training on machine operation, screens or processing technology should call 440-876-6203 for NC4 Operation course availability.) Course topics include:

- Basic machine operation and safety features
- Clamp and injection unit descriptions
- Operational and alarm/fault message screens
- Machine layout/component identification
- Preventive maintenance and lubrication requirements
- NC4 Control system diagnostics and troubleshooting
- Hydraulic systems: symbols & advanced hydraulic controls
- Hydraulic print reading and circuit analysis
- Electrical symbols and control circuits
- Operation and troubleshooting of the C-Dias modules

3 days, 9:00 A.M. to 5:00 P.M.                      Course fee: \$1300  
Location: Cleveland Tech Center  
Dates: May 9-11 and Nov. 14-16, 2017

## Caliber Series - Hydraulic, Electrical and Mechanical System Maintenance with Pathfinder 3000 - 5000 Controls

This classroom course is designed for maintenance personnel (both technical and supervisory) who require a better understanding of the overall machine operation and maintenance including detailed circuit tracing of the hydraulic and electrical control systems. (Individuals requiring training on Pathfinder 3000 – 5000 processing techniques *only* should contact the Training Department.) Course topics include:

- Basic machine operation, safety features & troubleshooting
- Clamp and injection unit maintenance
- Hydraulic/electrical systems overview
- Alarm message, production monitor and calibration screens
- Preventive maintenance and lubrication requirements
- Hydraulic systems: basic theory, controls, symbols, advanced hydraulic controls and hydraulic circuit analysis
- Pathfinder 3000-5000 control: system calibration, alarm faults and service screens, principles and functions of input and output devices, control panel layout and hardware description, control modules description and electrical control circuit diagram

3 days, 9:00 A.M. to 5:00 P.M.                      Course fee: \$1300  
Location: Cleveland Tech Center  
Dates: April 25-27 and September 19-21, 2017

## HT/HP Series - Hydraulic, Electrical and Mechanical System Maintenance with Pathfinder 3000 - 5000 Controls

This classroom course is for maintenance personnel (technical & supervisory) requiring a better understanding of overall machine operation and maintenance including detailed circuit tracing of the hydraulic and electrical control systems. (Individuals requiring training on Pathfinder 3000 – 5000 processing techniques *only* should contact the Training Department.) Topics include:

- Basic machine operation, safety features & troubleshooting
- Clamp and injection unit maintenance
- Hydraulic/electrical systems overview
- Alarm message, production monitor and calibration screens
- Preventive maintenance and lubrication requirements
- Hydraulic systems: basic theory, controls, symbols, advanced hydraulic controls (cartridge valves, proportional valves & variable volume pumps), & hydraulic circuit analysis
- Pathfinder 3000 - 5000 control: system calibration, alarm faults and service screens, control panel layout and hardware description, control modules description and electrical control circuit diagram

3 days, 9:00 A.M. to 5:00 P.M. Course fee: \$1300

Location: Cleveland Tech Center

Dates: April 4-6 and Oct. 17-19, 2017



## HT/HP Series - Hydraulic, Electrical and Mechanical System Maintenance with the VDU Control

This classroom course is designed for maintenance personnel (both technical and supervisory) who require a better understanding of the overall machine operation and maintenance including detailed circuit tracing of the hydraulic and electrical control systems. (Individuals requiring training on VDU processing techniques *only* should contact the Training Department.) Course topics include:

- Basic machine operation, safety features and troubleshooting
- Clamp and injection unit maintenance
- Hydraulic/electrical systems overview
- Alarm message, production monitor and calibration screens
- Preventive maintenance and lubrication requirements
- Hydraulic systems: basic theory, controls, symbols, advanced hydraulic controls (cartridge valves, proportional valves and variable volume pumps), and hydraulic circuit analysis
- VDU control: system calibration, alarm faults and service screens, control panel layout and hardware description, control modules description and electrical control circuit diagram

3 days, 9:00 A.M. to 5:00 P.M. Course fee: \$1300

Location: Cleveland Tech Center

Dates: April 11-13, June 20-22 and Oct. 24-26, 2017



## Additional Training Courses

The following classes are also available in Cleveland based on customer request:

- Pathfinder 3000 - 5000 Control Operation - 2 days, \$900
- Ergotech with NC4 Maintenance - 3 days, \$1300
- NC4/Ergo Control Operation - 2 days, \$900

Please contact Mark Lepole for more information at (440) 876-6203 or via email at [Mark.Lepole@sdpmna.com](mailto:Mark.Lepole@sdpmna.com).

## 2017 Training Registration Form

Registrant Name(s) \_\_\_\_\_

Job Title \_\_\_\_\_

Company \_\_\_\_\_

Address \_\_\_\_\_

City, State and Zip Code \_\_\_\_\_

Phone: \_\_\_\_\_

Email: \_\_\_\_\_

Course #1 \_\_\_\_\_

Date(s) \_\_\_\_\_ Cost \_\_\_\_\_

Course #2 \_\_\_\_\_

Date(s) \_\_\_\_\_ Cost \_\_\_\_\_

Total: \_\_\_\_\_

Special Lunch Dietary Requirements: \_\_\_\_\_

### Billing Information

American Express     Visa     Mastercard     Discover

Credit Card Number \_\_\_\_\_ Expiration Date \_\_\_\_\_

Name on Card \_\_\_\_\_

Purchase Order Number \_\_\_\_\_

Please send this form to Terry Rieser via email to [Terry.Rieser@sdpma.com](mailto:Terry.Rieser@sdpma.com) or by using the Strongsville mailing address or fax number below. A form that can be filled out on your computer can be found at:

**[sumitomo-shi-demag.us/pdfs/Training\\_Form\\_2017.pdf](http://sumitomo-shi-demag.us/pdfs/Training_Form_2017.pdf)**



**[sumitomo-shi-demag.us](http://sumitomo-shi-demag.us)**

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